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RUSH MEDICAL COLLEGE

SEVENTY-THIRD ANNUAL ANNOUNCEMENT



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CALENDAR OF RUSH MEDICAL COLLEGE

1915

- June 21, Monday.—Summer Quarter begins.
July 1, Thursday.—The Fiscal Year of the College begins.
July 5, Monday.—Celebration of Independence Day: a holiday.
July 29, Thursday.—Second Term, Summer Quarter, begins.
Sept. 3, 4, Friday, Saturday.—Quarterly Examinations.
Sept. 4, Saturday.—Summer Quarter ends.
Sept. 5-Sept. 30.—Summer Recess.
Oct. 1, Friday.—Autumn Quarter begins.
Nov. 8, Monday.—Second Term, Autumn Quarter, begins.
Nov. 25, Thursday.—Thanksgiving Day: a holiday.
Dec. 21, 22, 23, Tuesday, Wednesday, Thursday.—Quarterly Examinations.
Dec. 23, Thursday.—Autumn Quarter ends.
Dec. 23-Jan. 2.—Quarterly Recess.

1916

- Jan. 3, Monday.—Winter Quarter begins.
Feb. 10, Thursday.—Second Term, Winter Quarter, begins.
Feb. 22, Tuesday.—Washington's Birthday: a holiday.
March 23, 24, 25, Thursday, Friday, Saturday.—Quarterly Examinations.
March 25, Saturday.—Winter Quarter ends.
March 26-April 2.—Quarterly Recess.
April 3, Monday.—Spring Quarter begins.
May 8, Monday.—Second Term, Spring Quarter, begins.
May 30, Tuesday.—Memorial Day: a holiday.
June 12, Monday.—Special Clinics for the Alumni Association.
June 13, Tuesday.—Special Clinics; Class-Day Exercises of the Graduating Class.
June 14, Wednesday.—3:00 P.M., Graduating Exercises; 5:00 P.M., Annual Business Meeting of the Alumni Association; 6:00 P.M., Annual Reception and Dinner of the Faculty and Alumni.
June 15, 16, 17, Thursday, Friday, Saturday.—Quarterly Examinations.
June 17, Saturday.—Spring Quarter ends.

CALENDAR FOR THE YEAR 1915-16

1915

June 13	Sunday	Convocation Sunday
June 14	Monday	College Day
June 15	Tuesday	Summer Convocation
June 16	Wednesday	} Quarterly Examinations
June 17	Thursday	
June 18	Friday	
June 18	Friday	
June 21	Monday	<i>Summer Quarter begins</i>
June 14-19		Examinations of College Entrance Examination Board
July 5	Monday	Celebration of Independence Day: a holiday
July 17	Saturday	Examinations for removal of conditions and incompletes incurred during Spring Quarter
July 28	Wednesday	} Examinations for the First Term of Summer Quarter
July 29	Thursday	
Aug. 29	Sunday	Second Term of Summer Quarter begins
		Convocation Sunday
Sept. 3	Friday	} Examinations for Second Term of Summer Quarter
Sept. 7-10		Second Term of Summer Quarter ends
Sept. 30	Thursday	Entrance Examinations
		Examinations for removal of conditions and incompletes incurred during Spring and Summer Quarters for all students returning for Autumn Quarter
Oct. 1	Friday	<i>Autumn Quarter begins</i>
Nov. 25	Thursday	Thanksgiving Day: a holiday
Dec. 19	Sunday	Convocation Sunday
Dec. 20	Monday	} Quarterly Examinations
Dec. 22	Wednesday	
Dec. 23	Thursday	
Dec. 21	Tuesday	
Dec. 23	Thursday	Autumn Quarter ends

1916

Jan. 3	Monday	<i>Winter Quarter begins</i>
Jan. 29	Saturday	Examinations for removal of conditions and incompletes incurred during Autumn Quarter
Feb. 12	Saturday	Lincoln's Birthday: a holiday
Feb. 22	Tuesday	Washington's Birthday: a holiday
Mar. 19	Sunday	Convocation Sunday
Mar. 21	Tuesday	Spring Convocation
Mar. 22	Wednesday	} Quarterly Examinations
Mar. 23	Thursday	
Mar. 24	Friday	
Mar. 25-April 2		
April 3	Monday	<i>Spring Quarter begins</i>
April 14	Friday	Annual Conference with Co-operating Schools
April 29	Saturday	Examinations for removal of conditions and incompletes incurred during Winter Quarter
May 30	Tuesday	Memorial Day: a holiday
June 11	Sunday	Convocation Sunday
June 12	Monday	College Day
June 13	Tuesday	Summer Convocation
June 14	Wednesday	} Quarterly Examinations
June 15	Thursday	
June 16	Friday	
June 16	Friday	

RUSH MEDICAL COLLEGE
IN AFFILIATION WITH
THE UNIVERSITY OF CHICAGO

HISTORY

Rush Medical College is one of the oldest institutions of learning in the Northwest, having been chartered by a special act of the legislature of the state of Illinois in February, 1837. It was founded by the late Daniel Brainerd, who was its first president. The first course of lectures was delivered in the second story of a frame building on Clark Street, near Randolph, in 1843. In 1844 a college building was erected at the corner of Dearborn Avenue and Indiana Street (now Grand Avenue), a structure which was remodeled and enlarged in 1855. In 1867 a larger building was erected on the site of the old one. This edifice was destroyed in the great fire of 1871 and for three years the College occupied a temporary amphitheater in the grounds of the Cook County Hospital, then located at Arnold and Eighteenth streets. In 1875 the present Clinical Building was erected, and in 1893 a Laboratory Building, which greatly increased the facilities for practical instruction, was erected on the south side of Harrison Street, opposite the Clinical Building. The facilities for clinical instruction were largely increased in 1903 by the addition of the Senn Building, seven stories in height, adjoining the Clinical Building on the east. In 1887 the College became the medical department of Lake Forest University, retaining, however, its autonomy. This relation was dissolved by mutual consent in April, 1898, and in the same month the present affiliation with the University of Chicago was established. In 1883 the Presbyterian Hospital, adjoining the College, was established, and the building then erected for the hospital was subsequently enlarged by the addition of the Daniel A. Jones Memorial. In 1908 an affiliation was entered into with the Children's Memorial Hospital similar to that obtaining with the Presbyterian Hospital, and in 1911 a similar affiliation was entered into with the Home for Destitute Crippled Children. Rush Medical College is one of the several institutions officially recognized by the Royal Colleges of Physicians and of Surgeons of London, England.

GOVERNMENT

The government of the College is vested in a "perpetual Board of Trustees" distinct from the teaching force of the College, which was constituted by a special act of the General Assembly of Illinois, in February, 1837, and of which the Governor of the state, the Lieutenant-Governor, and the Speaker of the House of Representatives are members *ex officio*. This board is responsible to the state for the careful management of the financial and educational interests of the College, and for the discipline of its students.

AFFILIATION

By the terms of affiliation with the University of Chicago, the Board of Trustees is composed of members not belonging to the teaching force of the College. This board assumes the financial management and appoints the Faculty, but delegates to the latter the control of the educational work subject to the rules of the University and the approval of the Trustees. The affiliation thus assures the maintenance of a higher order of instruction and a steady advance in modern educational methods. The University offers three Fellowships to graduates of the College, yielding the University fees and entitling the holders to the privileges of its biological laboratories. It provides for granting the degree of Bachelor of Science to students of the College who have had suitable preliminary education and who comply with the University regulations established for that degree. The courses of the first two years of the medical curriculum are offered at the University only.

LOCATION

The College is situated on West Harrison Street, between Hermitage Avenue and Wood Street, and can be reached by any of the trains of the Metropolitan Elevated Railway, the Marshfield Avenue station of which is three blocks east of the College; by the Ogden Avenue and Van Buren Street electric lines, which cross Wood Street two blocks north of the College; or by the Harrison Street electric car line, which runs on West Harrison Street.

The telephone number is West 112.

Address all correspondence to RUSH MEDICAL COLLEGE, Chicago, Illinois.

LOCATION OF THE UNIVERSITY OF CHICAGO

The University is situated on the Midway Plaisance between Cottage Grove and Dorchester avenues, and can be reached by the Cottage Grove Avenue electric cars (from Wabash Avenue), by the South Side Elevated Railway, by the Illinois Central Railroad to South Park station, or by the Sixty-third Street electric cars from the Englewood railway stations.

Mail and baggage service is provided at the Information Office in Cobb Lecture Hall.

The telephone number of the University is Midway 800.

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- ARTHUR B. CARTER, PH.D., Associate in Chemistry, University of Chicago.
- ERNEST WILLIAM POTTHOFF, M.D., Associate in Dermatology, 746 South Elmwood Avenue, Oak Park.
- ARTHUR NORTON MACKEY, M.D., Associate in Dermatology, 3420 Sheffield Avenue.
- HAROLD STANARD ADAMS, PH.D., Associate in Physiological Chemistry, University of Chicago.
- GEORGE HALPERIN, M.D., Associate in Medicine, 3200 Douglas Boulevard.
- HENRY WILLIAM ABELMAN, M.D., Associate in Medicine, 6152 Kenmore Avenue.
- JOHN JOSEPH ALDERSON, M.D., Associate in Medicine, 607 Blue Island Avenue.
- WILLIAM FREDERICK DEY, M.D., Associate in Medicine (Nervous and Mental Diseases), La Grange, Ill.
- HENRIETTA MAE FARQUHARSON, M.D., Associate in Ophthalmology, 25 East Washington Street.
- CARL H. DAVIS, M.D., Associate in Obstetrics and Gynecology, 15 East Washington Street.
- HARVEY RAYMOND BASSINGER, S.B., Associate in Physiology and Pharmacology, University of Chicago.
- EDWARD MCGINNIS, M.D., Associate in Laryngology and Otology, 104 South Michigan Avenue.
- AUGUST STRAUCH, M.D., Associate in Medicine (Pediatrics), 4617 Kenmore Avenue.
- RAYMOND DAVID MULLINX, S.B., Associate and Lecture Assistant in Chemistry, University of Chicago.
- GEORGE THOMAS CALDWELL, A.M., Associate in Pathology, University of Chicago.
- ISADORE MICHAEL TRACE, M.D., Associate in Medicine, 914 South Ashland Avenue.
- DONALD PUTNAM ABBOTT, M.D., Associate in Medicine, 122 South Michigan Boulevard.
- RUSSELL MORSE WILDER, M.D., PH.D., Associate in Medicine, 122 South Michigan Boulevard.
- LEWIS VICTOR HEILBRUNN, PH.D., Associate in Zoölogy, University of Chicago.
- CLARA HARRISON TOWNE, PH.D., Associate in Medicine (Nervous and Mental Diseases), 122 South Michigan Boulevard.
- HOMER KING NICOLL, M.D., Associate in Pathology, 122 South Michigan Boulevard.
- JOHN WOOD MCARTHUR, A.M., Associate in Zoölogy, University of Chicago.
- HARRY G. HARDT, M.D., Associate in Medicine, 6800 Constance Avenue.
- WILLIAM FRANCIS HEWITT, M.D., Associate in Obstetrics and Gynecology, 1230 East Sixty-third Street.
- RICHARD HUIZENGA, M.D., Associate in Obstetrics and Gynecology, 25 East Washington Street.
- EMORY HILL, M.D., Associate in Ophthalmology, 30 North Michigan Boulevard.
- JAMES W. ROWNTREE, M.D., Lecturer in Radiology, Presbyterian Hospital.
- HUGH JAMES POLKEY, M.D., Assistant in Surgery (Genito-urinary), 5100 Sheridan Road.
- THEODORE DROSDOWITZ, M.D., Assistant in Surgery (Genito-urinary), 1656 West Twelfth Street.

- JOHN ALFRED GRAHAM, M.D., Assistant in Surgery, 32 North State Street.
DAVID C. STRAUS, M.D., Assistant in Surgery, 949 Hyde Park Boulevard.
EVA ORMENTA SCHLEY, Ph.D., Assistant in Physiology, University of Chicago.
SIGISMUND FRANKLIN WATERMAN, M.D., Assistant in Medicine, 2758 Washington Boulevard.
GEORGE EDWARD BAXTER, M.D., Assistant in Medicine (Pediatrics), 4603 Evanston Avenue.
FLOYD BURKE RILEY, M.D., Assistant in Surgery, 122 South Michigan Boulevard.
JOHN FRANK WAUGH, M.D., Assistant in Dermatology, 25 East Washington Street.
EDWARD ALLEN OLIVER, M.D., Assistant in Dermatology, 404 South Ashland Boulevard.
CHARLES OTTO CARLSTROM, G.D., Assistant in Kinesitherapy, 108 North State Street.
EDMUND CHARLES HUMPHREY, S.B., S.M., Assistant in General Chemistry, University of Chicago.
EDWIN DANIEL LEMAN, S.B., Assistant in Physical Chemistry, University of Chicago.
MAURICE BUCHSBAUM, M.D., Assistant in Medicine, 857 Addison Street.
CHARLES ALLEN GRIFFITH, M.D., Assistant in Medicine, River Forest, Ill.
LELAND ELDORUS PHIPPS, M.D., Assistant in Medicine (Pediatrics), 25 East Washington Street.
EDWIN THOMAS SECOR, M.D., Assistant in Medicine (Nervous and Mental Diseases), LaGrange, Ill.
PHILIP STANLEY CHANCELLOR, M.D., Assistant in Medicine (Pediatrics), 2732 Pine Grove Avenue.
CHARLES SCHOTT, M.D., Assistant in Medicine (Pediatrics), 1301 North Clark Street.
THOMAS P. LYNAM, M.D., Assistant in Surgery (Orthopedic), 32 North State Street.
RICHARD BARTLETT OLSON, M.D., Assistant in Surgery (Orthopedic), Lombard, Ill.
ROBERT ORLANDO RITTER, M.D., Assistant in Surgery (Orthopedic), 1000 Wells Street.
NATHANIEL C. NELSON, M.D., Assistant in Surgery, 1908 Lincoln Avenue.
BENJAMIN BARKER BEESON, M.D., Assistant in Cutaneous Pathology, 802 West Madison Street.
JEANNETTE BROWN OBENCHAIN, Ph.B., Technical Assistant in Anatomy, University of Chicago.
LIBBIE HENRIETTA HYMAN, S.B., Assistant in Zoölogy, University of Chicago.
WESLEY C. BECKER, S.B., Assistant in Zoölogy, University of Chicago.
LEROY HENDRICK SLOAN, S.B., Assistant in Physiology, University of Chicago.
LEO LEWIS HARDT, S.B., Assistant in Physiology, University of Chicago.
JOHN TENNYSON MYERS, S.B., Assistant in Quantitative Analysis, University of Chicago.
WILBY T. GOOCH, A.M., Assistant in General Organic Chemistry, University of Chicago.
RENÈ DE POYEN, Assistant in Organic Chemistry, University of Chicago.

- SIDNEY MARSH CALDWELL, S.B., Research Assistant in Chemistry, University of Chicago.
- OSCAR JACOB ELSESSER, S.B., Laboratory Assistant in Pathology, University of Chicago.
- WILLIAM ERNEST CARY, S.B., Assistant in Bacteriology, University of Chicago.
- WILLIAM HARLEY GLAFKE, M.D., Assistant in Medicine, 122 South Michigan Boulevard.
- BURTON T. GORDON, M.D., Assistant in Medicine, 1406 North Hamlin Avenue.
- HENRY JOHNSON ULLMANN, M.D., Assistant in Medicine, Highland Park.
- WALTER HOWARD MEENTS, M.D., Assistant in Surgery, 3201 Franklin Boulevard.
- ALBERT HERR MONTGOMERY, M.D., Assistant in Surgery, 6205 Broadway.
- FRANKLIN BENEDICT MCCARTHY, M.D., Assistant in Surgery, 5536 Sheridan Road.
- WILLIAM WELLES HOYT, M.D., Assistant in Surgery (Orthopedic), 122 South Michigan Boulevard.
- JOSEPH G. BERKOWITZ, M.D., Assistant in Surgery (Genito-urinary), 1323 South Halsted Street.
- ROBERT R. RANSMEIER, M.D., Assistant in Surgery (Genito-urinary), 5453 South Halsted Street.
- LOUIS DANIEL SMITH, M.D., Assistant in Surgery, 32 North State Street.
- ST. CLAIR VANCE, M.D., Assistant in Surgery (Genito-urinary), 1201 North Clark Street.
- STEFAN HRYNIEWIECKI, M.D., Assistant in Laryngology and Otology, 1518 West Division Street.
- HENRY H. KLEINPELL, M.D., Assistant in Medicine (Pediatrics), 48 West Division Street.
- LORIN C. COLLINS, M.D., Assistant in Medicine (Pediatrics), 25 East Washington Street.
- SIGURD KRAFT, M.D., Assistant in Medicine (Pediatrics), 125 East Chicago Avenue.
- LOUIS WENDLIN SAUER, M.D., Assistant in Medicine (Pediatrics), Evanston, Ill.
- GEORGE EMANUEL BURGET, S.B., Assistant in Physiology, University of Chicago.
- STEFRIED MAURER, S.B., Assistant in Physiological Chemistry, University of Chicago.
- ROBERT WOOD KEETON, S.M., Assistant in Physiology, University of Chicago.
- JOSEPH O. BALCAR, S.B., Assistant in Physiological Chemistry, University of Chicago.
- WILLIAM B. MCCLURE, M.D., Assistant in Medicine (Pediatrics), Children's Memorial Hospital.
- WALTER H. O. HOFFMAN, M.D., Assistant in Medicine (Pediatrics), 1520 East Sixty-fifth Place.
- DENTON J. BROWN, S.M., Assistant in General Chemistry, University of Chicago.
- E. D. WILSON, S.B., Assistant in General Chemistry, University of Chicago.
- SAMUEL NYE CLARK, M.D., Assistant in Medicine (Nervous and Mental Diseases), Kankakee, Ill.
- PERCIVAL BAILEY, S.B., Assistant in Anatomy, University of Chicago.
- LOUIS HENRY KORNDER, A.B., Assistant in Anatomy, University of Chicago.
- CHARLES EDWARD WATTS, S.B., Assistant in Anatomy, University of Chicago.

- BENJAMIN HARRY HAGER, Assistant in Pharmacology, University of Chicago.
HARRY LEE HUBER, S.B., Research Assistant in Pathology, University of Chicago.
WILLIAM TUDOR PEARCE, S.B., Assistant in General Chemistry, University of Chicago.
- ROBERT S. BERGHOFF, M.D., Assistant in Medicine, 25 East Washington Street.
GEORGE HOWELL COLEMAN, M.D., Assistant in Medicine, 122 South Michigan Boulevard.
- LEE CONNELL GATEWOOD, A.M., M.D., Assistant in Medicine, 122 South Michigan Boulevard.
- MAX BENJAMIN LEVITON, M.D., Assistant in Medicine, 3532 Douglas Boulevard.
CLAUDE ALLEN LINK, M.D., Assistant in Medicine, 1623 West Van Buren Street.
BEVERIDGE HARSHAW MOORE, M.D., Assistant in Medicine, 6158 Cottage Grove Avenue.
- ABRAHAM B. RIMMERMANN, M.D., Assistant in Medicine, 3435 Sheffield Avenue.
FRANK AMOS CHAPMAN, M.D., Assistant in Medicine (Pediatrics), 30 North Michigan Boulevard.
- GARAHED A. Z. GARABEDIAN, M.D., Assistant in Medicine (Pediatrics), 4358 Lincoln Avenue.
- CECIL THEODOR HEIDEL, M.D., Assistant in Medicine (Pediatrics), 2373 Lincoln Avenue.
- LORETTA K. MAHER, M.D., Assistant in Medicine (Pediatrics), 3323 Flournoy Street.
- WALTER FRITZ WINHOLT, M.D., Assistant in Medicine (Pediatrics), 2001 North California Avenue.
- KAETHE WELLER DEWEY, M.D., Assistant in Obstetrics and Gynecology, Rush Medical College.
- BENJAMIN BRAUDE, M.D., Assistant in Laryngology and Otology, 827 South Ashland Avenue.
- SPENCER CORNELIUS DICKERSON, M.D., Assistant in Laryngology and Otology, 3601 South State Street.
- MAJOR HENRY WORTHINGTON, M.D., Assistant in Ophthalmology, 22 East Washington Street.
- WILLIAM HUGH FOLSOM, M.D., Assistant in Ophthalmology, Gary, Ind.
- ABRAHAM BERNARD SCHWARZ, M.D., Assistant in Medicine (Pediatrics), Children's Memorial Hospital.
- JOHN DAYHUFF ELLIS, M.D., Assistant in Medicine (Occupational Diseases), 160 West Jackson Boulevard.
- FRANK RAYMOND MENNE, S.B., M.D., Assistant in Pathology, Rush Medical College.
- AUGUST JOHNSON, Mechanical Assistant in Physiology, University of Chicago.
FREDERICK WILLIAM GAARDE, M.D., *Dane Billings* Fellow in Medicine, 122 South Michigan Boulevard.
- BENJAMIN FRANKLIN DAVIS, M.D., PH.D., *Nicholas Senn* Fellow in Surgery, 6459 Minerva Avenue.
- GATEWOOD, M.D., *A. D. Thompson-Bevan* Fellow in Surgery, Presbyterian Hospital, Chicago.
- KAETHE WELLER DEWEY, M.D., Fellow in Pathology, Rush Medical College.
JAMES HERBERT MITCHELL, M.D., Fellow in Dermatology, Hyde Memorial Fund, 25 East Washington Street.

FELLOWS APPOINTED FOR 1915-16

(IN THE DEPARTMENTS OFFERING MEDICAL COURSES AT THE
UNIVERSITY OF CHICAGO)

LESTER ARONBERG, S.B., Chemistry.
 CATHARINE LINES CHAPIN, A.B., Zoölogy.
 QUAESITA CORNWELL DRAKE, A.B., A.M., Chemistry.
 EMANUEL BERNARD FINK, S.B., Pathology.
 LEO FINKELSTEIN, S.B., Chemistry.
 RALPH EDWIN HALL, S.M., A.M., Chemistry.
 MILTON THEODORE HANKE, S.B., Chemistry.
 DAVID ELSON HARROWER, S.B., Zoölogy.
 MILFORD EVERETT HINDS, S.M., Bacteriology.
 JOHN MÖLLER JANSON, S.M., Physiology.
 LLOYD KENDRICK RIGGS, S.B., Physiological Chemistry.
 WILLARD ALLEN ROBERTS, S.B., Chemistry.
 JOHN EDWARD SCHOTT, S.B., Chemistry.
 GEORGE FRED SUTHERLAND, A.M., Physiology.
 RICHARD WATKIN WATKINS, S.B., Anatomy.

EXTRA-MURAL INSTRUCTORS

AT THE HOME FOR DESTITUTE CRIPPLED CHILDREN

WALLACE BLANCHARD, M.D., Assistant Clinical Professor of Surgery (Ortho-
pedic).

AT CHICAGO ISOLATION HOSPITAL

HEMAN SPALDING, M.D., Associate Clinical Professor of Medicine.

AT ST. LUKE'S HOSPITAL

LEWIS L. MACARTHUR, M.D., Assistant Clinical Professor of Surgery.

AT THE CHILDREN'S MEMORIAL HOSPITAL

COLEMAN GRAVES BUFORD, M.D., Assistant Clinical Professor of Surgery.

AT THE ILLINOIS CHARITABLE EYE AND EAR INFIRMARY

OSCAR DODD, M.D., Assistant Professor of Ophthalmology.

AT THE COOK COUNTY HOSPITAL

MAY MICHAEL, M.D., Assistant Professor of Medicine (Pediatrics).

OFFICERS OF ADMINISTRATION

AT THE UNIVERSITY OF CHICAGO

HARRY PRATT JUDSON, President of the University, Harper Memorial Library,
Room W11.WALTER A. PAYNE, University Recorder and Examiner, Cobb Lecture Hall,
Room 5A.†CHARLES RICHMOND HENDERSON, University Chaplain, Harper Memorial
Library, Room M16.

† Deceased.

DAVID ALLAN ROBERTSON, Secretary to the President, Harper Memorial Library, Room W13.
 ERNEST DEWITT BURTON, Director of the University Libraries, Harper Memorial Library, Room M27.
 JOHN MILTON DODSON, Dean of Medical Students, Botany Building, First Floor.
 HARRY GIDEON WELLS, Dean in Medical Work, Botany Building, First Floor.
 MARION TALBOT, Dean of Women, Cobb Lecture Hall, Room 14A.

AT RUSH MEDICAL COLLEGE

FRANK BILLINGS, Dean of the Faculty.
 JOHN MILTON DODSON, Dean of Students.
 OLIVER SAMUEL ORMSBY, Secretary of the Faculty.
 EPHRAIM FLETCHER INGALS, Comptroller.
 JAMES H. HARPER, Registrar.
 CATHARINE A. MCAULIFFE, Librarian.

THE ADMINISTRATIVE BOARD OF MEDICAL AFFAIRS

AT THE UNIVERSITY OF CHICAGO

THE PRESIDENT, *Chairman*

THE RECORDER, <i>ex officio</i> .	DEAN LEON CARROLL MARSHALL, <i>ex officio</i> .
DEAN JOHN MILTON DODSON, <i>ex officio</i> .	
DEAN HARRY GIDEON WELLS, <i>ex officio</i> .	DEAN HENRY GORDON GALE, <i>ex officio</i> .
DEAN JAMES ROWLAND ANGELL, <i>ex officio</i> .	DEAN MARION TALBOT, <i>ex officio</i> .

PROFESSOR JOHN MERLE COULTER.
 PROFESSOR ALBERT ABRAHAM MICHELSON.
 PROFESSOR NATHANIEL BUTLER.
 PROFESSOR SAMUEL WENDELL WILLISTON.
 PROFESSOR FRANK BILLINGS.
 PROFESSOR LUDVIG HEKTOEN.
 PROFESSOR JOHN ULRIC NEF.
 PROFESSORIAL LECTURER WALTER STANLEY HAINES.
 PROFESSORIAL LECTURER EPHRAIM FLETCHER INGALS.
 PROFESSORIAL LECTURER ARTHUR DEAN BEVAN.
 PROFESSORIAL LECTURER JOHN CLARENCE WEBSTER.
 PROFESSOR JULIUS STIEGLITZ.
 PROFESSOR ALBERT PRESCOTT MATHEWS.
 PROFESSOR EDWIN OAKES JORDAN.
 PROFESSOR FRANK RATRAY LILLIE.
 PROFESSOR ROBERT RUSSELL BENSLEY.
 PROFESSOR CHARLES JUDSON HERRICK.
 PROFESSOR ROBERT ANDREWS MILLIKAN.
 PROFESSOR HERBERT NEWBY MCCOY.
 ASSOCIATE PROFESSOR CHARLES MANNING CHILD.
 ASSOCIATE PROFESSOR ANTON JULIUS CARLSON.

ASSOCIATE PROFESSOR WILLIAM LAWRENCE TOWER.
 ASSOCIATE PROFESSOR BASIL COLEMAN HYATT HARVEY.
 ASSOCIATE PROFESSOR HORATIO HACKETT NEWMAN.
 ASSISTANT PROFESSOR DAVID JUDSON LINGLE.
 ASSISTANT PROFESSOR NORMAN MACLEOD HARRIS.
 ASSISTANT PROFESSOR FRANK CHRISTIAN BECHT.
 ASSISTANT PROFESSOR ARNO BENEDICT LUCKHARDT.
 ASSISTANT PROFESSOR FRED CONRAD KOCH.
 ASSISTANT PROFESSOR PRESTON KYES.
 ASSISTANT PROFESSOR ROBERT RETZER.
 DR. E. V. L. BROWN.
 DR. GEORGE WILLIAM BARTELMEZ.
 DR. PAUL GUSTAV HEINEMANN.
 DR. ELBERT CLARK.
 DR. EDWARD FREDERICK HIRSCH.
 DR. MORRIS MILLER WELLS.
 DR. SHIRO TASHIRO.
 DR. CHARLES HENRY SWIFT.
 DR. HAROLD S. ADAMS.
 DR. HARVEY R. BASSINGER.
 DR. LOUIS V. HEILBRUNN.
 MR. GEORGE T. CALDWELL.
 MR. JOHN WOOD MACARTHUR.

INTRODUCTORY STATEMENT

FRESHMAN AND SOPHOMORE CLASSES WILL BE LIMITED TO 100 IN EACH CLASS.

FOR THE SESSION OF 1915-16, THE NUMBER OF STUDENTS ADMITTED TO THE JUNIOR AND SENIOR CLASSES WILL BE LIMITED TO 120 IN EACH CLASS. NO APPLICATION WILL BE RECEIVED AFTER SEPTEMBER 1, 1915.

Students entering with conditions in any branch, or students seeking admission to advanced standing from another medical school, are strongly advised to enter for the Summer Quarter, beginning June 21.¹ The student should, if possible, commence the medical curriculum with the Autumn Quarter in order to pursue the medical courses in proper sequence.

Changes in rules and regulations.—The right is reserved by the Faculty to make changes at any time in requirements for admission, curriculum fees, or any rules and regulations.

The curriculum.—The curriculum of Rush Medical College, extending over five annual sessions of nine months (three quarters) each, embraces (1) two years of work in the fundamental branches of Anatomy, both gross and microscopic, Neurology, Embryology, Physiology, Physiological Chemistry, Pharmacology, Hygiene and Bacteriology, and Pathology; (2) two years in the clinical branches of Materia Medica, Therapeutics, Clinical Pathology, Medicine,

¹ It is greatly to the advantage of every student to begin his medical work without conditions in any of the branches required for admission, especially Physics, Chemistry, and Biology. In these and all other departments of the University of Chicago courses are given in the Summer Quarter by which deficiencies can be made up. For students entering from other medical schools, special review courses are offered in Anatomy, Physiology, and the other fundamental medical sciences, and satisfactory work in these courses will be accepted in lieu of examination on the work of the first two years.

Surgery, Obstetrics, and the special lines of practice; and FOR STUDENTS ENTERING THE MEDICAL COURSE AT THE BEGINNING OF THE SUMMER QUARTER, 1914, OR THEREAFTER, A FIFTH YEAR.¹

The work of this fifth year will consist of:

A. An internship in a hospital approved by the Faculty, and taken under conditions prescribed by the Faculty, or

B. Advanced work as a Fellow or Research Student in one of the departments of the College with the presentation of a thesis embodying original work.

Fundamental branches at the University of Chicago.—The courses in the fundamental branches are offered only at the University of Chicago, in the spacious Hull Biological Laboratories, by instructors whose time is wholly devoted to teaching and investigation in their respective lines. It is believed that the student pursuing these studies in the atmosphere of an institution devoted to scientific work cannot but gain a broader and more thorough conception of these sciences. Such a training will not only afford a better preparation for the clinical courses of the Medical College and for the practice of medicine and surgery, but will also enable the student to follow more easily in paths along which medical advances are being made, and to apply these new discoveries in his daily work.

The clinical branches are taught at Rush Medical College, with its Central Free Dispensary, at the Presbyterian Hospital, the Children's Memorial Hospital, the Home for Destitute Crippled Children, the Cook County Hospital, the Annie W. Durand Memorial Hospital, and other hospitals in the vicinity of the College.

The requirements for admission comprise (a) the completion of a four-year high-school course, and, in addition, (b) two years of work in a recognized college or university (see pp. 24-26).

It is the firm conviction of the Faculty that, under the conditions now prevailing in the practice of medicine, and which are rapidly becoming more exacting, no person can afford to enter upon the study of medicine with a preparation less thorough and comprehensive than that demanded by these minimum requirements. The medical examining boards in some of the states require this amount of premedical work as a prerequisite for licensure. *Every student should complete a four-year college course including the physics, chemistry, and biology above mentioned before entering the Medical School, if his age and other circumstances make it possible for him so to do.* This additional college work should secure for him a greater breadth of culture and a catholicity of interest which will make him a man of larger power, influence, and usefulness in the community.

Admission to advanced standing.—Students or graduates of other medical colleges whose work is recognized by this College may be admitted to advanced standing (see p. 29).

Requirements for graduation.—The minimum requirements for graduation comprise attendance upon four sessions of three quarters (nine months) each, the completion of a prescribed amount of work, and the passing of certain examinations both written and practical (see p. 29).

¹ Since the session of 1905-6, this fifth year has been offered as an optional year, leading to the degree of Doctor in Medicine, "Cum Laude." The increasing demands for internes has made it possible for every graduate of Rush Medical College to secure such a position in a first-class hospital.

Of students beginning the study of Medicine with the Summer Quarter, 1914, or thereafter, a fifth year will be required for graduation (see p. 41).

The combined course for the degrees of M.D., and S.B., A.B., or Ph.B.—Attention is called to the fact that courses are offered in the University of Chicago, in the Departments of Art, Literature, and Science, in all the branches of a liberal education (see p. 27).

Higher degrees.—A Master's degree or the degree of Ph.D. may be secured by special work in the medical sciences, and additional residence, in conformity with the regulations of the University covering such degrees.

The elective system.—The work of the medical curriculum is, in part, elective, the choice of the student for each quarter being subject to certain restrictions (see p. 40).

The quarter system.—The College is in session during four quarters each year, and a student may enter at the beginning of any quarter. *Students beginning their medical work, however, are advised to commence with the Autumn Quarter* (see p. 35).

The tuition fee is sixty dollars per quarter, or one hundred and eighty dollars for each of the four annual sessions, this tuition including all laboratory fees (see pp. 31-35).

Student self-help.—Many opportunities are afforded in Chicago for students to earn a portion (and in exceptional cases the whole) of their expenses. A booklet giving fuller information in regard to this matter will be mailed on application.

GENERAL REGULATIONS

Students are admitted to the Medical Courses as medical students (of Rush Medical College); and as (1) *undergraduate students* (candidates for a Bachelor's degree, S.B., A.B., or Ph.B.), or (2) *graduate students*. (*Graduates of the University of Chicago, or of other universities or colleges of good standing, are admitted to the Medical Courses as graduate students; they are allowed all the privileges of the members of the Graduate Schools of the University.*) In addition to students in regular standing, provision is made for the admission to the University of undergraduate students not seeking degrees. Such students are known as *unclassified students*. They may register for medical subjects, but they are not candidates for the M.D. degree.

1. *Admission.*—(a) Each student must present to the Faculty a certificate of good moral character, signed by at least two physicians of good standing in the state in which the applicant last resided. Blank certificates for this purpose may be had on application to the Dean. (b) He must be able to comply with the requirements for admission to the medical courses of the University of Chicago (see pp. 24-26). In brief, they consist of a four-year high-school course plus two years of college work, which must have included College Physics, General Chemistry, and Biology, and a reading knowledge of German or French. (c) He will matriculate and register as a student of Rush Medical College as well as of the University at the beginning of his medical course. Such matriculation and registration is accomplished at the University without extra fee.

2. *Medical Courses as undergraduate work in the course for a Bachelor's degree.*—(a) The first two years' work in Medicine may be taken as the third and fourth years of the Bachelor of Science course, or, in very large part, of the course for the

degree of A.B. or Ph.B. (For requirements, see pp. 27-28.) Students who wish to enter college and prepare to take the medical work as part of their Baccalaureate course may enter at the beginning of the Junior College course (first college year or at any further stage of advancement).¹ (b) Each student must comply with 1(a). (c) In order to comply with the rules of the medical examining boards of several states, a student will matriculate with the Dean of Rush Medical College (at the University) at the beginning of his work in Medicine. He will consult with the Dean of Medical Students each quarter in regard to his work, and take a card of advice to the Dean of the Senior Colleges, with whom the student will continue to register until he receives a Bachelor's degree. *Credit will not be given toward the M.D. degree unless the student complies with this regulation.*

3. *Admission as a graduate student.*—(a) Admission to the Graduate Schools of the University is granted (1) to those who have been graduated from the Colleges of the University of Chicago with the degree A.B., Ph.B., or S.B.; (2) to those holding Baccalaureate degrees from other institutions of good standing. (b) Application for admission in the case of students not graduates of the University should be accompanied by testimonials as to character and scholarship. Such testimonials should take the form of diplomas, written or printed theses, or satisfactory evidence in some other form of the student's fitness for admission. (c) A graduate student taking the Medical Courses must comply with 1(a) and (c). He will consult each quarter with the Dean of Medical Students, and will take a card of advice from him to the Dean of the Graduate School, with whom the student will register. *Credit will not be given toward the M.D. degree unless the student complies with this regulation.* (d) Advanced standing in the Medical Courses is granted for work done in other medical schools according to the conditions stated on p. 29 of this Circular.

4. *Unclassified students.*—Persons at least twenty-one (21) years of age not seeking a degree may be admitted, through the office of the University Examiner, to the courses of instruction offered in the University, as unclassified students, on the following conditions:

1. They shall present (a) credentials showing the completion of work equivalent to the admission requirements of the Colleges, or (b) evidence of successful experience as a teacher or other valuable educative experience in practical life.

2. Each applicant shall present by certificate or examination evidence of training in English at least equivalent to the entrance requirements of the Colleges in that subject. This requirement may be waived in the case of foreign students of ability who have a sufficient knowledge of the English language to profit by the instruction offered.

3. They shall give satisfactory reason for not classifying and becoming candidates for degrees.

4. They enter the University for the purpose of making a study of a definite subject or group of subjects for which adequate preparation has been received. In case of doubt as to the applicant's ability to pursue successfully the work desired, the approval of the instructor to whose courses admission is sought, or of an official representative of the department concerned, will be required.

¹ A student desiring to enter the course as a candidate for the S.B., AB., or Ph.B. degree is requested to enter into correspondence upon the subject with the University Examiner of the University of Chicago, Chicago, Ill.

5. They may not register for elementary courses only, i.e., courses intended for first-year college students.

6. They are subject to the general regulations pertaining to other undergraduates, including attendance at Chapel Assembly and work in Physical Culture.

7. They are ineligible for public appearance.

NOTE.—Students entering the University for the first time should make it a point to complete all arrangements for entrance, either by correspondence or in person, at least two days before the opening of the quarter.

THE CURRICULUM

1. *The fundamental medical branches.*—The course for the first two years' work in Medicine consists mainly of instruction in the fundamental medical sciences. It includes the following courses:

a) *Chemistry*, The Chemistry of Medicinal Drugs, $\frac{1}{2}$ major (85).¹

b) *Anatomy*, $6\frac{1}{2}$ majors as follows: Human Anatomy (Dissecting), $3\frac{1}{2}$ majors (1, 2, 3, 4); Splanchnology, Histology, and Cytology, 1 major (10); Embryology, 1 major (Zoölogy 20 or 21); Neurology, 1 major (Anatomy 17).

c) *Physiology*, 6 majors as follows: Physiology, 3 majors (12, 13, 14); Physiological Chemistry, 2 majors (19, 20); Pharmacology, 1 major (21).

d) *Pathology*, 1 major, as follows: Pathology, 1 major (1).

e) *Hygiene and Bacteriology*, $1\frac{1}{2}$ majors, as follows: Bacteriology, $1\frac{1}{2}$ majors (2).

f) 3 additional majors in any department or departments of the student's choice, approved by the Faculty.

A total of 18 majors.² All this work is given at the University of Chicago.

2. *The clinical medical branches.*—The work of the last two, or clinical, years comprises the following branches: (a) *Materia Medica*, Therapeutics, Medical Jurisprudence, and Preventive Medicine, at least 2 majors; (b) *Pathology*, at least 1 major; (c) *Medicine*, at least $5\frac{1}{2}$ majors; (d) *Surgery*, at least $5\frac{1}{2}$ majors; (e) *Obstetrics and Gynecology*, at least 3 majors; (f) *Laryngology and Otology*, at least 1.2 majors; (g) *Ophthalmology* at least .8 major; (h) *Skin and Venereal Diseases*, at least 1 major; (i) Additional work in any branch, or branches, of the student's choice, at least 2 majors; a total of 22 majors.

REQUIREMENTS FOR ADMISSION TO THE MEDICAL COLLEGE

These comprise as a minimum (a) the successful completion of a four-year high-school or academy course, qualifying the student to enter the Junior College (Freshman class) of the University of Chicago, and (b) 18 majors (=6 quarters) of the usual college course, or a full equivalent therefor.

A. HIGH-SCHOOL WORK REQUIRED FOR ADMISSION TO THE JUNIOR COLLEGE (FRESHMAN CLASS), UNIVERSITY OF CHICAGO³

A student must offer for admission 15 units⁴ of credit by examination or by certificate from an approved school from which he has graduated with an average

¹ The numbers in parentheses refer to the course numbers in the corresponding department.

² For definition of major see p. 36.

³ A complete and more detailed statement of the requirements and the ground covered by each subject will be sent to any principal, teacher, or student on application to the Dean of Medical Students.

⁴ A unit corresponds to a daily recitation of 45 minutes throughout the school year of thirty-six weeks.

grade higher than the pass mark of the school by at least 20 per cent of the difference between that mark and 100. Among these must be (a) 3 units of English, (b) a "principal group" of 3 or more units, and (c) a "secondary group" of 2 or more units. Of the 15 units 7 must be selected from the subjects named in the groups designated below; 5 may be selected from any subjects for which credit toward graduation is given by the approved school from which the student receives his diploma.

The principal and secondary groups offered may be selected from the following: (1) Greek, (2) Latin, (3) Modern language other than English, (4) History, Civics, and Economics, (5) Mathematics, (6) Physics, Chemistry, Botany, Zoölogy, General Biology, Physiology, Physiography, Geology, Astronomy. To form a language group the units must be all in one language. In other groups any combination of subjects may be made. Credit is not given for less than 1 unit each in Algebra, Plane Geometry, Physics, Chemistry, or a language. In Latin 2 units must be offered if the subject is to be continued in college. Less than $\frac{1}{2}$ unit in any subject is not accepted.

SUMMARY OF ADMISSION REQUIREMENTS

3 units of English.

3 (or more) units in a single group, 1-6.

2 (or more) units in another single group, 1-6.

2 (or less) units in subjects selected from any of the groups 1-6.

[Total 10 units in English and groups 1-6.]

5 units selected from any subjects accepted by an approved school for its diploma.

Entrance with conditions is not permitted.

Students intending to study medicine are strongly advised to take in the high school 2 units of Latin (Elementary Grammar and Caesar), 3 units of German or French, 1 unit each of Chemistry and Physics—with laboratory work. If these branches have not been taken in the high school, they must be taken as part of the college work required for admission (see section B, p. 27). One-half unit of Trigonometry is strongly advised. A diploma is not accepted as sufficient evidence of such preparation, but specific statement is required as to the amount and character of the work in each branch of study. Blanks are furnished by the University for the presentation of such credits, and will be mailed on application to the University Examiner.

TIME OF PREPARATION—ADMISSION UNITS

Preparation for admission to a Junior College is expected to cover a period of four years in a secondary school (high school or academy) of high grade. Admission credits are reckoned in units. A unit is a course of study comprising not less than 150 hours of prepared work. Two hours of laboratory work are regarded as the equivalent of one hour of prepared work.

METHODS OF ADMISSION

Admission to the Junior Colleges of the University may be obtained by one of the following methods: by certificate, by examination, or by a combination of the two methods.

1. *Admission by certificate.*—Students who present credentials showing graduation from any of the following schools and whose course of study covers

the entrance requirements indicated above will, upon the recommendation of their respective principals, be admitted without examination: (1) the accredited¹ schools of the University, including (a) schools accredited by the North Central Association of Secondary Schools and Colleges; (b) schools approved by the Board of Admissions after inspection by official representatives of the University; (2) schools accredited by the New England College Entrance Certificate Board; (3) schools outside the territory of the associations above mentioned but accredited by a leading state university whose standards of admission are substantially the same as those of the University of Chicago. The University reserves the right to refuse admission to any student whose preparatory work was of such grade as to create serious doubt of his ability to pursue college work successfully.

2. *Admission by examination.*—Regular entrance examinations are held twice each year, in June and in September, the June examinations being those of the College Entrance Examination Board. The candidate may, at his option, take his examinations at different times, provided that no examination is valid after three years from the date when taken and that no student shall be admitted to examination at more than three regular periods. Students who present by certificate less than 15 units from an accredited school may complete the requirements for admission by examination.

a) *The June examination.*—The examinations held by the College Entrance Examination Board in June of each year will be accepted as a satisfactory substitute for the admission examinations held by the University of Chicago. The board's examination this year will be held during the week June 14–18 and the corresponding week of the following year.

All applications for examination must be addressed to the Secretary of the College Entrance Examination Board, Post-Office Sub-Station 84, New York, N.Y., and must be made upon a blank form to be obtained from the secretary of the board upon application.

b) *The September examination.*—The September examinations are held at the University. Those for 1915 will be held September 7–10. Applications for admission to these examinations should be made to the University Examiner at least thirty days in advance. Each applicant will pay in advance an examination fee of \$5.00. The University Cashier's receipt for this fee entitles the student to admission to examination in as many subjects as he wishes to take at one time.

c) *Special examinations.*—Students seeking admission at the beginning of the Winter or Spring Quarter may, upon application to the University Examiner at least thirty days in advance, arrange for special examination in subjects in which they are deficient. For admission to such special examination a fee of \$5.00 is charged.

B. COLLEGE WORK REQUIRED FOR ADMISSION TO THE MEDICAL COURSES

Eighteen majors (two years) of college work must have been taken, and this work must have included the following branches: (1) Chemistry—(a) 3 majors of Inorganic Chemistry (or 2 majors, if 1 unit of high-school Chemistry with laboratory work has been taken). (b) 1 major of Organic Chemistry. (c) 1

¹ The continuation of any school on the accredited list of the University will depend upon the records made in the University by its graduates admitted on certificate.

major of Qualitative Analysis. This work in Chemistry corresponds to the courses Chemistry 1, 2, 3, 4, and 6 (see pp. 55-56). The student is advised to take Quantitative Analysis, but this is not required.

(2) Physics—4 majors of Physics (or 2 majors if 1 unit of high-school Physics has been taken). This work in Physics corresponds to the courses Physics 1, 2, 3, and 4 (see p. 54).

(3) 2 majors of General Biology (Zoölogy 1 and Zoölogy 17, or Botany 1).

(4) A reading knowledge of German or of French (ordinarily 2 units of high-school or 4 majors of college work). This knowledge is determined by an efficiency test given, for 1915-16, about November 27.

(5) 3 majors of Latin (Caesar and Elementary Grammar) unless 2 units have been completed in high school.

Every student who is considering the question of entering upon the study of medicine is requested to write to the Dean of Medical Students for a blank application for admission, to fill out the same carefully, giving full details of his high-school and college work, and to mail the application, thus completed, to the Dean. He will be informed as promptly as possible as to just what credit he can be given, and in what, if any, branches he is deficient. This will make it unnecessary for the student to estimate closely his own credits, and will secure for him a prompt and definite reply to his inquiry concerning his preparation for the study of medicine.

C. REQUIREMENTS FOR THE COMBINED COURSE FOR THE DEGREES OF S.B. AND M.D.

The college preparation for the Medical Courses may be accomplished at the University of Chicago in six quarters. A student may be admitted to the Medical Courses conditioned in not more than three majors of college work, *but all his conditions must have been removed before he can enter upon the work of the second year of the Medical Courses.*

Attention is called to the fact that any credits which may be required in addition to high-school work may be secured in the Colleges of Arts, Literature, and Science of the University of Chicago by attendance during extra quarters before entering the Medical Courses, or, in small part, by taking courses in these Colleges during the student's attendance upon the Medical Courses. Students deficient in premedical work are urgently advised to enter the University for the Spring or Summer Quarter, in order to make up deficiencies. Credit will be accepted for such work done in any other college or university of equal standing.

Students seeking a Bachelor's degree (A.B., Ph.B., or S.B.) from the University of Chicago, in connection with the degree of M.D. from Rush Medical College, must comply with the established regulations of the University prescribed for the courses leading to such degrees. As the fundamental branches of the medical curriculum are taught in the University, the student may combine the course for a Bachelor's degree with that for the Medical degree, electing as science courses those offered in the Departments of Anatomy, Physiology, etc., which are also courses in the medical curriculum. The prescribed work for these degrees is indicated on p. 27.

While it is thus possible for one to secure a Bachelor's degree and the degree of M.D. in from six to six and one-half years, every student should secure a more thorough and comprehensive collegiate preparation if it is possible for him so to do. For students taking this broader course, the following subjects are recommended as of especial value in preparation for medical study: Greek, 3 majors; Calculus, 1 major; Elementary Botany, 1 major; General Morphology

of Thallophytes, 1 major; Zoölogy, 3 majors; Introductory Physiology, 1 major; Physical Chemistry, 1 major; Quantitative Chemical Analysis, 1 major; Physiography, 1 major; Psychology, 2 to 4 majors.

TOTAL REQUIREMENTS FOR THE BACCALAUREATE DEGREES

COLLEGE COURSES

College courses, with few exceptions, are given as "majors," one exercise daily throughout a quarter. Three majors and the required work in Physical Culture constitute full work for a quarter. In comparison with admission credits two majors are reckoned as equal to one unit.

REQUIREMENTS FOR THE ASSOCIATE'S TITLE

During his first two years the student is required to take:

1. Two majors of English (courses 1 and 3). English 1 must be taken in the first quarter of residence.

2. A "continuation group" of three consecutive majors, taken during the first year, which continues the work of either his principal or secondary admission group or of a subject in which he took one unit in the Senior year of high school. Careful consideration should be given to the choice of these courses.

3. Enough majors in each of the following "distribution groups" to make his total (high school+college) credit in each group four majors (=2 units).

I. Philosophy, History, and Social Science: Departments I-VI.

II. Foreign Language (all 4 majors in one language): Departments XI-XIV.

III. Mathematics: Department XVII.

IV. Science: Departments XVIII-XXVIII.

The title of Associate is conferred upon the completion of 18 majors, with at least 32 grade-points, including the fulfilment of the specified requirements as listed above.

REQUIREMENTS FOR A BACHELOR'S DEGREE

The Bachelor's Degree is conferred when the student has completed 36 majors, and obtained at least 72 grade-points. These 36 majors shall include one principal sequence of at least 9 coherent and progressive majors taken in one department or in a group of departments, and one secondary sequence of at least 6 majors selected from a different department or group of departments. These sequences must have the approval of the Dean. The courses in medicine may be counted in satisfaction of the principal sequence and the premedical courses may be counted in satisfaction of the secondary sequence.

The degree of A.B. is conferred when the principal sequence consists of 11 majors of Latin and 9 majors of Greek (7 if all are taken in the University) including entrance work. A secondary sequence of 6 majors is also required.

The degree of Ph.B. is conferred when the principal sequence has been taken in Departments I-XVI.

The degree of S.B. is conferred when the principal sequence has been taken in Departments XVII-XXVIII.

Mathematics may at the option of the student be used as the principal department for the degree of either Ph.B. or S.B.

ADMISSION TO ADVANCED STANDING IN THE MEDICAL COURSES

Students are admitted to advanced standing in the Medical Courses of the University as follows:

Students from other medical schools whose standards are fully equivalent to those of this institution may receive credit for time spent—estimated in months—and for work successfully completed in such institutions, provided it is equivalent to corresponding work in the Medical Courses in the University. Such a student should give an explicit statement in regard to his preliminary education, in high school or academy and in college, before beginning the study of medicine, the date of beginning and ending of each session attended in a medical college, together with the name of the college and a statement of the studies which he has successfully completed, this latter statement setting forth the exact number of hours given to each subject. The credit claimed in each branch must be passed upon by the Dean of Medical Students or by the head of the corresponding department at the University.

Application blanks.—Blanks for presenting these credits will be furnished on application to the Dean of Medical Students. A student may matriculate at any time in person, or by correspondence.

Students seeking admission to advanced standing are urgently advised to enter for the Summer Quarter. Students entering with advanced standing usually find it advantageous and frequently necessary to take additional work in the fundamental medical branches.

REQUIREMENTS FOR GRADUATION

The following are the requirements for the degree of Doctor of Medicine:

The candidate must be not less than twenty-one years of age, and must have studied medicine the legal period. He must have paid all dues, must have complied with all the requirements, and must have maintained unexceptionable conduct while at the College.

He must have attended twelve full quarters, or an equivalent amount of time, in a recognized medical school, of which at least the last three quarters must have been taken consecutively in this institution, and forty-five months must have elapsed between the beginning of his first course of medical lectures and the date of his graduation.

He must have completed successfully all of the work required, as follows: 18 majors of work in the Freshman and Sophomore years, comprising a minimum of 6½ majors in Anatomy (from courses offered in the Department of Anatomy and Neurology and the subdepartment of Embryology; these courses include both Gross and Microscopic Anatomy¹); 5½ majors in Physiology (from courses offered in the Department of Physiology and the subdepartments of Physiological Chemistry and of Pharmacology); 2½ majors in the Departments of Pathology and Bacteriology; 3 majors in one or more of the departments of his choice.²

His work for the first two years must be pronounced satisfactory by the Committee on Promotions, when a certificate for the completion of the first 18 majors of medical work will be issued to him.

¹ They must include the dissection of the lateral half of the human body.

² As to the conditions governing such choice see p. 38, paragraph 4.

Twenty-two majors of work in the Junior and Senior years, comprising a minimum of 2 majors in Pharmacy, Materia Medica, Therapeutics, and Preventive Medicine; 1 major in Pathology; 5½ majors in Medicine; 5½ majors in Surgery, at least .8 of a major of which must be in Surgical Anatomy; 3 majors in Obstetrics and Gynecology,¹ at least 2 majors of which must be in Obstetrics; 1.2 majors in Laryngology and Otology; .8 major in Ophthalmology; 1 major in Skin and Venereal Diseases, at least .4 major in each; 2 additional majors in any branch or branches of his choice. These requirements are presented in detail in the departmental statements, pp. 61-78.

He must have passed, successfully, a final examination, both written and practical, in Materia Medica and Therapeutics; Pathology; Medicine; Surgery; Obstetrics and Gynecology; Laryngology and Otology; Ophthalmology; Skin and Venereal Diseases.

He must attend the graduating exercises and receive his diploma in person, unless excused for cause by special action of the Faculty.

GENERAL INFORMATION FOR STUDENTS ENTERING THE FRESHMAN AND SOPHOMORE CLASSES

ROUTINE OF ENTRANCE

I. CREDENTIALS

Applications should be addressed to The University of Chicago, or to Rush Medical College, Chicago, Ill. When presenting himself for admission to the University, the student should bring his *admission credits*, if he is entering a Junior College at its beginning; his *letter of dismissal* and an official statement concerning his previous work, if he is entering with advanced standing from another institution; and a *diploma*, if he is applying for admission to a Graduate School.

These documents should be presented at the office of the Dean of Medical Students, Botany Building. Detailed directions will be furnished in the Dean's office as to the mode of matriculating and registering for courses of instruction desired.

II. MATRICULATION AND REGISTRATION

1. *Time of registration.*—(a) Students in residence will register on the days announced on the Bulletin boards and in the *Weekly Calendar*. (b) Students entering the University for the first time, or resuming work after absence for a quarter, will register on the first day of the quarter.

2. *Order of procedure for new students.*—New undergraduate students will: (a) In case they come from a secondary school or another college present credentials to the Examiner and secure a certificate of admission, and a *Course Book*. This should be done by correspondence. New students are urged to send their credentials to the Examiner at least two weeks before they come to register. (b) Matriculate in the office of the Dean of the School or College to which admission is desired. Matriculation is granted on presentation of the proper credentials which entitle the student to enter the University. As evidence of admission the student is given a *matriculation card*. This card should be retained

¹ Each student must have personally attended not less than ten patients in confinement.

under all circumstances, as it must be shown whenever membership in the University is to be demonstrated. (c) Register in the same office for the courses of study desired for the ensuing quarter. For this purpose the student will be given a *registration card* for the quarter, on which, after consultation with the Dean, the courses desired will be entered. (d) Pay the University fees for the ensuing quarter. In order to do this, the student will present the matriculation card and the proper registration card at the office of the Cashier, Press Building, Room 1. On payment of fees the Cashier will stamp the matriculation card and return it to the student, together with a receipt for tuition fees and for laboratory fees (if any).

Tuition and other fees may conveniently be paid by check to the order of the University of Chicago. Details as to fees will be found below.

The names of the students will be sent to instructors as entitled to attend classes *only after the fees have been paid*, as above specified.

Graduate students follow the above procedure but report to the Dean of the Ogden Graduate School of Science instead of to the Examiner.

FEEES FOR MATRICULATION, TUITION, DEPOSITS, AND APPARATUS

1. *Matriculation fee.*—(a) The matriculation fee is \$5.00, and is required of every student on entrance to the University. It is payable but once. (b) A medical student will also matriculate as a student of Rush Medical College. No extra fee is charged, and the matriculation is good for the complete Medical Course, including the clinical years. (c) An undergraduate student, candidate for a Bachelor's degree, who wishes to take the Medical Course as a part of the work for the Bachelor's degree, will matriculate also as a student of Rush Medical College at the beginning of the first year of his work in the Medical Course. No extra fee is charged, and the matriculation is good for the complete Medical Course, including the clinical years.

NOTE.—Matriculation for Rush Medical College can be accomplished at the University through the Dean of Medical Students.

2. *Tuition fee.*—(a) The tuition fee for the Medical Courses (3 to 3½ majors each quarter) is \$60.00 per quarter, including all laboratory fees.

Under the medical practice acts and the rules of the medical examining boards of most of the states of this country, an applicant for a license to practice must have attended at least four annual sessions in a recognized medical school. Therefore, a student taking the Medical Courses with a view to procuring the degree of M.D. must matriculate *as a medical student* at least forty-five months before the date of his expected graduation in medicine. From the date of such matriculation he is required to pay the tuition fee for the Medical Courses, whether he is registered as a Senior College student, a graduate student, or otherwise.

In order that a graduate student, Senior or Junior College student may have his work counted toward the M.D. degree, he must be matriculated as a student of Rush Medical College and must each quarter secure from the Dean of Medical Students a card of advice as to registration, and must present this card to his own Dean on registering with him.

NOTE.—A student who is taking the Medical Courses with no intention of securing the medical degree may, if he prefers, pay the usual University fee of \$40.00 per quarter, with additional laboratory fees as follows:

In Chemistry and all Biological Laboratory courses, \$5.00 for a major course and \$2.50 for a minor course.

(b) Students taking two majors or less will pay \$20.00 per major. (c) All tuition and laboratory fees are due and payable on or before the *first* day of each quarter. All fees are payable to the Cashier, Press Building, Room 1.

Registration is not complete until all University bills are paid. Those who fail to meet this obligation within the first five days of the quarter are not regarded as members of the University. After the fifth day, to secure membership in the University, the consent of the Dean and the payment of a fee of \$5.00 for late registration will be required.

3. *Deposits.*—(a) A deposit of \$5.00 is required from each student to cover the cost of unnecessary damage in the University buildings, and of avoidable loss and breakage in the laboratories. The deposit must be made on entering the University. Deductions will be made from this deposit to cover the cost of articles not returned, or of damage to University property. Each student will be charged for damage or loss for which he is individually responsible, and for his *pro rata* share of damage or loss, the responsibility for which cannot be individually located. The balance will be refunded. (b) Each student who procures a skeleton from the Osteological Laboratory will deposit \$12.00 for the same, which sum will be refunded when the skeleton is returned uninjured.

4. *Microscopic and other laboratory apparatus and supplies.*—(a) A compound microscope is required for most of the Medical Courses. Every student is strongly advised to purchase a good microscope, with an immersion lens, in order that he may become familiar with the same instrument which he will use after his graduation. Students not possessing a microscope may rent one from the University Supply Department, at a cost of \$1.50 per quarter for a compound microscope, and \$1.00 additional for an immersion lens. (b) Students doing laboratory work in the Departments of Zoölogy, Anatomy, Physiology, Botany, Bacteriology, and Pathology are required to purchase a laboratory supply and breakage ticket at the office of the Cashier, and file the same at the laboratory supply store, Room 10, Botany Building. (c) Students taking courses in Chemistry are required to purchase Chemistry coupon tickets. Unused portions of coupon tickets are refunded. (d) The necessary textbooks may be purchased at the University Press. (e) All students taking courses in the Department of Physical Culture are required to provide themselves with a gymnasium suit for use in the gymnasium. The cost of such a suit is about \$4.00.

ROOMS, BOARD, AND GENERAL EXPENSES

There are ten dormitories in the University quadrangles. Two of these are reserved for the students of the Divinity School, and five are for women. A University House is organized in each dormitory; each House has a Head appointed by the President of the University, and a House Committee, elected by the members; also a House Counselor, selected from the Faculties of the University by the members of the House. The membership of the House is determined by election, and each House is self-governing under the general control of the University.

The cost of rooms in the dormitories is from \$25.00 to \$75.00 per quarter of twelve weeks. This includes heat, light, and care. Each hall for women has separate dining-hall and parlors. The cost of table board in these halls is \$4.50 per week.

All applications for rooms, or for information concerning rooms and board within or without the quadrangles, should be made to the Cashier.

For further details, see special circulars as to rooms and board, which will be sent on application.

The following table will furnish an estimate of the annual expenses for thirty-six weeks of a student in the University, residing within the quadrangles:

	Lowest	Average	Liberal
University bill, tuition*.....	\$180.00	\$180.00	\$180.00
Rent and care of room.....	60.00	105.00	225.00
Board.....	135.00	162.00	225.00
Laundry.....	15.00	25.00	35.00
Textbooks and stationery.....	10.00	20.00	50.00
Total.....	\$400.00	\$492.00	\$715.00

*Medical students attending the first quarter must pay the matriculation fee of \$5.00 to the University.

It is believed that students who find it necessary to reduce expenses below the lowest of these estimates can do so. By application to the Housing Bureau, rooms outside the quadrangles, furnished, heated, lighted, and cared for, may be obtained at from \$1.50 a week upward. This rate is obtainable, as a rule, when two or more students room together. Room and board in private houses are offered from \$6.00 per week upward. The University Commons, Hutchinson Hall, offers to students meals *à la carte*. Lexington Commons for women offers meals *à la carte* during the Autumn, Winter, and Spring Quarters. During the Summer Quarter the University Commons is open to both men and women.

BOARD AND ROOMS OUTSIDE THE UNIVERSITY

The University, through the Housing Bureau, renders personal assistance to students who have not secured rooms in the residence Halls. Upon arrival at the University, students should apply at once to the Housing Bureau, University Press Building, for a list of inspected and approved rooms and boarding-houses. Guides are in attendance to accompany students while selecting rooms.

Incoming students are especially cautioned against strangers who approach them at the depot or on the streets and offer their services in securing rooms.

There are always more rooms on the list than will be occupied, and consequently there is always a choice. Renting by mail is not satisfactory.

Students living outside the Halls are not permitted to room in any building in which a family does not reside.

Women students are not permitted to live where there is no reception room for their use.

Students are strongly advised to secure rooms only through the Housing Bureau. Assistance in adjusting any difficulties that may arise will thus be assured.

To accommodate married students and those wishing to keep house, the University has provided a building of small unfurnished flats of 2, 3, 4, and 5 rooms. Information concerning these can be obtained from the office of the Superintendent of Buildings and Grounds.

GENERAL INFORMATION FOR STUDENTS ENTERING THE
JUNIOR AND SENIOR CLASSES AT RUSH
MEDICAL COLLEGE

Attendance.—In order to be credited properly with attendance on any given term or course, it is imperative that students be present at the opening of each quarter. *After the second day of any quarter no student can register except by special consent of the Dean, and the payment of \$5.00 late registration fee.* At least 80 per cent of any quarter or of the scheduled hours in any course for which a student is registered must be attended in order to receive credit for the course.

Matriculation.—Each student matriculates on entering the College for the first time, but not for subsequent quarters. Matriculation may be accomplished by mail.

Registration.—Each student registers before or at the beginning of each quarter by the payment of the tuition fee for the quarter, and filing a registration card.

In case of early registration this card is retained at the Registrar's office and *must be reclaimed by the student in person on the first or second day of the quarter. If not reclaimed at that time, the student's registration for the quarter will be canceled, and can only be restored by the consent of the Dean and the payment of \$5.00 late registration fee.*

A student, upon entering the College, at the beginning of his first quarter will procure from the Registrar a blank application for admission, fill out the same carefully, and return it to the Registrar, with the matriculation fee, for which he will receive a receipt.

The student will then present himself to the Dean of Students, and exhibit to him the credentials for admission to advanced standing (see requirements for admission to advanced standing, p. 29).

The Dean will issue a card certifying admission to the proper class and will advise respecting the courses of study to be taken.

College fees.—(1) Matriculation fee \$5.00 payable but once. (2) Tuition for each quarter, \$60.00. (3) A compound microscope is required for some of the clinical courses. Every student is strongly advised to purchase a good microscope, with an immersion lens, in order that he may become familiar with the same instrument which he will use after his graduation. Students not possessing a microscope may rent one from the College, at a cost of \$1.50 per quarter for a compound microscope, and \$1.00 additional for an immersion lens. Each Senior student is required to secure, for use in the clinical laboratories, a hemacytometer (cost, about \$3.00), and a hemoglobinometer or a Talquist scale. (4) No student can be assigned to any college work until his fees are paid. (5) The annual ticket for the County Hospital is \$5.00, which is procured from the Warden at the Hospital.

Deposits.—A deposit of \$5.00 is required from each student to cover the cost of unnecessary damage in the College buildings, and of avoidable loss and breakage in the laboratories. Deductions will be made from this deposit to cover the cost of articles not returned, or of damage to College property. Each student will be charged for damage or loss for which he is individually responsible, and for his *pro rata* share of damage or loss, the responsibility for which cannot be individually located. The deposit must be made on entering the College.

PHYSICIAN'S FEE

Graduates of this College are admitted to all lectures upon the payment of the annual fee of \$5.00. Graduates of other colleges, attending the full course, will pay the fees of undergraduate students, or a physician may pay \$20.00 per month, which entitles him to attend all the courses offered for that period.

The number of persons who may register for some courses is limited. No student or practitioner is admitted to such course beyond the limit specified.

Graduates of this or other colleges who are visiting the city for a brief time are cordially welcomed, but are required to procure complimentary tickets at the office.

No one is authorized to make any modification of the terms regarding fees. On financial matters the Registrar, who represents the Comptroller at the College office, should be consulted.

The right is reserved to make changes in the fees, curriculum, or in any other matter at any time.

Schedule of lecture hours.—Schedules are issued from the College office giving the time of each exercise.

Board and lodging.—Rooms may be obtained in the vicinity of the College at from \$1.50 to \$3.00 per week. Day board may be had at from \$3.00 to \$5.00 per week. Board and room together may be obtained at from \$4.00 to \$7.00 per week. A Bureau of Information is maintained at the College to which students may apply for directions as to desirable board and lodging.

Books and instruments.—The average annual cost of the required books and instruments varies from \$20.00 to \$40.00.

The following table will furnish an estimate of the expenses of a student for each year at Rush Medical College:

	Lowest	Average	Liberal
Tuition for each year.....	\$180.00	\$180.00	\$180.00
Board and room.....	145.00	180.00	252.00
Laundry.....	15.00	21.00	36.00
Books and instruments.....	20.00	40.00	50.00
Incidental expenses.....	45.00	75.00	105.00
Total.....	\$405.00	\$496.00	\$623.00

THE YOUNG MEN'S CHRISTIAN ASSOCIATION

A branch of the Young Men's Christian Association is in active operation at Rush Medical College, and the headquarters of the West Side Association are situated within a short distance of the College buildings. Membership in the Association, with the privilege of gymnasium, bathrooms, lecture courses, etc., may be obtained through the Rush Medical branch at reduced prices. Further information in regard to the Association may be obtained by application to the Rush Medical branch of the Association.

THE QUARTER SYSTEM

The academic year is divided into four quarters. The Summer Quarter is divided into two terms. The year begins with the first day of the Summer Quarter.

The Autumn Quarter begins on October 1, except when this day falls on Sunday, when it begins on October 2; and it ends December 23, except that when this day falls on Saturday or Sunday it ends the preceding Friday (for the clinical courses, Saturday); and when December 23 falls on Monday it ends the preceding Saturday.

The Winter Quarter begins January 2, except when this day falls on Saturday or Sunday, when it begins the Monday following; and it ends on the Friday falling between March 18 and March 24 inclusive (for the clinical courses, Saturday).

The Spring Quarter begins on the Monday falling between March 28 and April 3 inclusive; and ends on the Friday falling between June 12 and 18 inclusive (for the clinical courses, Saturday).

The Summer Quarter begins on the Monday falling between June 15 and 21 inclusive; and ends on the Friday falling between August 28 and September 3 inclusive (for the clinical courses, Saturday).

Official University Holidays are observed on Lincoln's Birthday, Washington's Birthday, Memorial Day, Independence Day, and Thanksgiving Day. When one of these days falls on Sunday, the following Monday shall be observed as a holiday only in the case of Memorial Day and Independence Day.

THE MEDICAL CURRICULUM AS RELATED TO THE QUARTER SYSTEM

The general course of instruction in Rush Medical College requires four years of study in residence, with a minimum of attendance upon three quarters of each year. These years are designated as the Freshman, Sophomore, Junior, and Senior years, respectively.

A student may begin his college work on the first day of any quarter (see, however, p. 38, §5), and may continue in residence for as many successive quarters as he desires, and will receive credit for work accomplished. Attendance during all the four quarters of the year is optional, but will not secure a time credit of more than one year in a medical school. At least forty-five months must elapse between the date of the first matriculation and the date of graduation. The Senior year should be taken in three or more consecutive quarters. Under the restriction imposed, this system does not conflict with the existing medical-practice acts, nor with the rulings of the various state boards of medical examiners.

THE SUMMER QUARTER

Attention is directed to the special opportunities afforded for medical study in the Summer Quarter. The climate of Chicago is particularly well adapted to midsummer work. Instruction in all departments is given in the Summer Quarter.

DEFINITION OF MAJOR AND MINOR

A Major course is defined as a didactic or recitation course, occupying 5 hours a week for one quarter (a total of 60 hours), or a laboratory, practical, or clinical course, occupying 10 hours a week for one quarter (a total of 120 hours). A double major occupies twice the number of hours per week for the quarter.

A Minor course is a didactic or recitation course, occupying 5 hours a week for one-half a quarter, of six weeks; or a laboratory course, occupying 10 hours

per week for a similar period. The value of each course in the following departmental statements is stated as a *major* (Mj.), a *double major* (DMj.), a *minor* (M.), a *double minor* (DM.), or the decimal fraction of a *major* or *minor*.

GRADUATE COURSES IN MEDICINE FOR PHYSICIANS AND ADVANCED STUDENTS

Special opportunities are afforded to physicians and graduate students at Rush Medical College and at the University for advanced and research work in Physics, Chemistry, Zoölogy and Embryology, Anatomy, Neurology, Psychology, Physiology, Physiological Chemistry, and Pharmacology, and in Pathology and Bacteriology in Medicine, Surgery, Obstetrics, Gynecology, and in the other clinical departments. Research work may be conducted independently, or under the direction of an instructor in the department to which it belongs.

Physicians are admitted on payment of the matriculation fee, and payment of fees in proportion to the amount of work taken (see p. 35). The applicant's fitness for any course which he desires to take should be ascertained by consultation with the heads of the respective departments.

All of the courses offered are well adapted to students of this class, and they are outlined in pp. 61-78 of this Circular. Correspondence is invited in reference to special work other than the courses offered. It will be sufficient to address letters in reference to such courses to Rush Medical College.

Students desiring to engage in work leading to the degrees of Master of Science, Master of Arts, Master of Philosophy, or to the degree of Doctor of Philosophy, are requested to write for the *Circular of Information of the Graduate Schools* of the University of Chicago.

THE WORK OF THE MEDICAL COURSE FOR THE FRESHMAN AND SOPHOMORE YEARS

1. *Outline of the course.*—The course for the first two years' work in Medicine consists mainly of instruction in the fundamental medical sciences: Human Anatomy, Microscopic Anatomy, Histology, Neurology, Embryology, Physiology, Physiological Chemistry, Toxicology, Pharmacology, Bacteriology, and Pathology. All this work is given at the University of Chicago.

2. *Amount of work.*—The amount of work required is 18 majors.

3. *The curriculum.*—The following courses constitute the curriculum recommended for and pursued by the majority of the students:¹

a) *Chemistry*, The Chemistry of Medicinal Drugs, $\frac{1}{2}$ major (85).²

b) *Anatomy*, $6\frac{1}{2}$ majors as follows: Human Anatomy (Dissecting), $3\frac{1}{2}$ majors (1, 2, 3, 4); Splanchnology, Histology, and Cytology, 1 major (10); Embryology, 1 major (Zoölogy 20 or 21); Neurology, 1 major (Anatomy 17).

c) *Physiology*, 6 majors as follows: Physiology, 3 majors (12, 13, 14); Physiological Chemistry, 2 majors (19 and 20); Pharmacology, 1 major (21).

d) *Pathology*, 1 major, as follows: Pathology, 1 major (1).

e) *Hygiene and Bacteriology*, $1\frac{1}{2}$ majors, as follows: Bacteriology, $1\frac{1}{2}$ majors (2).

f) 3 majors in any branch or branches of the student's choice, as approved by the Faculty.

¹Detailed statements concerning the courses are given below under the various departments of instruction. They should be consulted in every case in regard to equivalent courses which may be submitted for those whose numbers are given in the above schedule.

²The numbers in parentheses refer to the course numbers in the corresponding department.

4. *Election of medical courses.*—Students with adequate preparation and special qualifications are permitted to elect other courses (usually advanced or research work), in lieu of some of those above prescribed.

In electing his work the student should bear in mind: (a) That the right of election must be confirmed in writing in advance by the Dean and by the head of the department concerned; (b) that his registration for each quarter must receive the approval of the Dean; (c) that the prerequisites for any course must have been satisfied before the course can be elected; (d) that a minimum amount of work in the several branches is required for graduation in Medicine.

5. *Arrangement of courses.*—The order of courses has been arranged in such a way as to insure so far as possible for the student beginning his medical studies with any single quarter of the year a complete annual course during any three consecutive quarters; *but students are advised to begin their medical work proper with the Autumn Quarter.*

ARRANGEMENT OF COURSES FOR SIX QUARTERS

Many of the required medical courses are given twice or, including the Summer Quarter, three times in one year. The fifteen majors of required and three majors of elective work may be taken in any order or combination desired by the student, provided he has the necessary preparation for each course when taken as indicated by the prerequisite courses. In the following tables under Groups I and II are given two arrangements of the courses for a normal two years' course for an average student, covering the Autumn, Winter, and Spring Quarters for two successive years.

Since many of the courses are repeated in the Summer Quarter, courses are indicated in their proper sequence for the convenience (a) of such students as wish to start their work in the Summer Quarter, instead of in the Autumn; (b) of such students as wish to go in the Summer Quarter after three quarters of work; (c) of such as wish to complete their work in the Summer Quarter after six or more quarters of work. The courses offered in the Summer Quarter are intended to be fully equivalent to those given in the other quarters.

SUMMER QUARTER, 1915

Group I	Group II
*Histology, Anatomy 10 Prerequisite: Biology, 2Mjs.	Same as Group I
*Embryology, Mj., Zoology 20 Prerequisite: Histology	
Neurology, Mj., Anatomy 17 Prerequisite: Histology	
Bacteriology, 1½Mjs., Bacteriology 2	
Physiological Chemistry, Mj., Physiology 19	
Prerequisite: Organic Chemistry (†Organic Chemistry, 1½Mjs., Chemistry 33, 34).	

* Students are strongly advised to take Histology and Embryology as part of the college work required for admission. It is of decided advantage to complete these courses before beginning Gross Anatomy (Dissection).

† Organic Chemistry is an entrance requirement and is not considered as a course in Medicine.

AUTUMN QUARTER, 1915

Group I

Histology, Mj., Anatomy 10
Dissection, 2Mjs., Anatomy 1, 2
Elective, $\frac{1}{2}$ Mj.

Group II

Histology, Mj., Anatomy 10, or
Embryology, Mj., Zoölogy 20
Prerequisite: Histology
Dissection, 1 or 2Mjs., Anatomy 1,
2, or
Organic Chemistry, Mj., Chemistry 4

WINTER QUARTER, 1916

Group I

Neurology, Mj., Anatomy 17
Prerequisite: Histology
Dissection, Mj., Anatomy 3 or 4
Physiological Chemistry, Mj., Physi-
ology 19
Prerequisite: Organic Chemistry

Group II

Physiological Chemistry, Mj., Physi-
ology 19
Prerequisite: Organic Chemistry
Dissection, 1 or 2Mjs., Anatomy 2 or
3, or
Histology, Mj., Anatomy 10, or
Neurology, Mj., Anatomy 17

SPRING QUARTER, 1916

Group I

Physiology, Mj., Physiology 12
Prerequisite: Physiological Chem-
istry, Physiology 19
Embryology, Mj., Zoölogy 20
Dissection, Mj., Anatomy 3 or 4, or
Bacteriology, 1 $\frac{1}{2}$ Mjs., Bacteriology 2
Prerequisite: Physiological Chem-
istry 19

Group II

Physiology, Mj., Physiology 12
Prerequisite: Physiological Chem-
istry 19
Neurology, Mj., Anatomy 17
Prerequisite: Histology
Dissection, Mj., Anatomy 3 or 4, or
Bacteriology, 1 $\frac{1}{2}$ Mjs., Pathology 21, or
Physiological Chemistry, Mj., Physi-
ology 20
(Prerequisite: Physiological Chem-
istry 19), or
Embryology, Mj., Zoölogy 20
Prerequisite: Histology

SUMMER QUARTER, 1916

Group I

Same courses as Summer Quarter, 1915,
and
Physiology, Mj., Physiology 13
Prerequisite: Physiology 12
Pharmacology, Mj., Physiology 21
Prerequisite: Physiology 12, 13, 14,
19, 20.

Group II

Same as Group I

AUTUMN QUARTER, 1916

Group I

Physiology, Mj., Physiology 13
Prerequisite: Physiology 12
Physiological Chemistry, Mj., Physi-
ology 20, or
Dissection, Mj., Anatomy 3 or 4, or
Bacteriology, 1 $\frac{1}{2}$ Mjs., Bacteriology 2, or
Pathology, Mj., Pathology 1
Prerequisite: Bacteriology 2

Group II

Physiology, Mj., Physiology 13
Prerequisite: Physiology 12
Physiological Chemistry, Mj., Physi-
ology 20
(Prerequisite: Physiology 19), or
Dissection, Mj., Anatomy 3 or 4, or
Embryology, Mj., Zoölogy 20, or
Bacteriology, 1 $\frac{1}{2}$ Mjs., Bacteriology 2, or
Pathology, Mj., Pathology 1
Prerequisite: Bacteriology 2

WINTER QUARTER, 1917

Group I	Group II
Physiology, Mj., Physiology 14	Same as Group I
Prerequisite: Physiology 13	
Pathology, Mj., Pathology 1	
Elective, Mj.	

SPRING QUARTER, 1917

Group I	Group II
Pharmacology, Mj., Physiology 21	Same as Group I
Prerequisite: Physiology 12, 13, 14, 19, 20	
Chemistry of Drugs, $\frac{1}{2}$ Mj.	
Prerequisite: Organic Chemistry	

SUMMER QUARTER, 1917

Group I	Group II
Same courses as Summer Quarters, 1915 and 1916, and	Same as Group I
Pharmacology, Mj., Physiology 21	
Pathology, 2Mjs., Pathology 1 and 2	

THE WORK OF THE CLINICAL YEARS

Elective and optional courses.—A certain number of courses, especially in the Freshman and Sophomore years of study, are required as essential to securing credit in making up the four-year curriculum which must precede graduation. All of the courses offered in the Junior and Senior years are elective; that is, the student will be required to select from the list of elective courses a number sufficient to insure him credit for about eleven majors each year. The term "major" is fully explained in another paragraph. By this system the student can select, not only his line of study, but also his teachers in such special lines, and can, further, so arrange his work that in successive years he can practically include all branches taught in the College. He will be required to present, however, a minimum amount of credit in each department. See requirements for graduation (p. 29).

Advice by the head of each department as to the recommended sequence of courses is contained in a circular of information issued to each student at the beginning of the Autumn Quarter.

The quarter system with elective courses is especially well adapted to the medical curriculum, and possesses the advantages of allowing each student to select a portion of his studies, and so to adapt his course to his tastes, his abilities, and his needs. The plan is *not* designed, however, to enable a student to prepare for a special line of practice. A broad and thorough education in general medicine is essential for adequate preparation for special practice in later years.

Optional courses, in addition to those described above, are offered to students who desire to add to the regular courses as outlined in the requirements for graduation. These optional courses are designed to promote a higher scholarship, and to increase facilities for work in special departments.

FIFTH YEAR

OF STUDENTS ENTERING THE MEDICAL COURSES AT THE BEGINNING OF THE SUMMER QUARTER, 1914, OR THEREAFTER, A FIFTH YEAR, HERETOFORE OPTIONAL, WILL BE REQUIRED FOR GRADUATION.

The work of this fifth year will consist of:

A. An internship in a hospital approved by the Faculty, and taken under conditions prescribed by the Faculty, or

B. Advanced work as a Fellow or Research Student in one of the departments of the College with the presentation of a thesis embodying original work.

I. THE DEPARTMENT OF ANATOMY

(AT THE UNIVERSITY DEPARTMENT XXIII AND INCLUDING COURSES IN THE DEPARTMENT OF ZOÖLOGY)

OFFICERS OF INSTRUCTION

ROBERT RUSSELL BENSLEY, A.B., M.B., Professor of Anatomy.
 CHARLES JUDSON HERRICK, PH.D., Professor of Neurology.
 BASIL COLEMAN HYATT HARVEY, A.B., M.B., Associate Professor of Anatomy.
 PRESTON KYES, A.M., M.D., Assistant Professor of Preventive Medicine.
 ROBERT RETZER, M.D., Assistant Professor of Anatomy.
 GEORGE WILLIAM BARTELMEZ, PH.D., Assistant Professor of Anatomy.
 ELBERT CLARK, S.B., Assistant Professor of Anatomy.
 CHARLES HENRY SWIFT, M.D., PH.D., Instructor in Anatomy.
 JEANNETTE BROWN OBENCHAIN, PH.B., Research Assistant in Anatomy.
 PERCIVAL BAILEY, S.B., Assistant in Anatomy.
 LOUIS HENRY KORNDER, A.B., Assistant in Anatomy.
 CHARLES EDWARD WATTS, S.B., Assistant in Anatomy.

GEORGE E. COGHILL, PH.D., Professor of Anatomy, University of Kansas (Summer, 1915).
 JOHN ALBERT KEY, S.B., Assistant in Anatomy, Johns Hopkins Medical School (Summer, 1915).
 RICHARD W. WATKINS, Assistant in Biology, New York University (Summer, 1915).

FELLOW, 1915-16

RICHARD WATKIN WATKINS, S.B.

INTRODUCTORY

The Department of Anatomy is organized to provide for instruction and research in vertebrate anatomy, including human anatomy, histology, embryology, and neurology. Two majors of elementary biology (Zoölogy 1 and Botany 1, or their equivalent) are prerequisite for all courses in the Department except 16.

Students of medicine and other students desiring to study anatomy are strongly recommended to plan their work so that courses in vertebrate anatomy (Zoölogy 17) and vertebrate embryology precede the work in human

anatomy. The recommended order of courses in preparation for work in human anatomy would thus be as follows: Zoölogy 1; Botany 1; Zoölogy 17; Anatomy 10 and Anatomy 10A; Zoölogy 20.

All students taking courses in Anatomy should have a good knowledge of French and German. For graduate students this is indispensable.

Students intending to take courses in Anatomy in satisfaction of the requirements for the degree of S.B., and those looking forward to graduate work in Anatomy, are recommended to plan their work in accordance with the general statement of the biological departments concerning courses in Biology. To such students the following courses in anatomy are recommended, to be taken in the order named: 10, 10A, 1, 2, 3, 4, 17, 18.

Courses in the embryology and comparative anatomy of vertebrates to the extent of three majors will be accepted by the Department as part of the total nine majors required for graduation.

COURSES OF INSTRUCTION

I. SENIOR COLLEGE COURSES

1, 2, 3, 4, Human Dissection.—The student makes a complete dissection of all structures, using atlases and textbooks as guides. The work is largely independent. Before receiving credit for his final dissection the student will be required to pass an oral examination on the anatomy of the whole body. Laboratory fee, \$5.00 per major. Lectures, 2:00, M., W., F.; laboratory work, 2:00–5:00, M. to F. 3½Mjs. Autumn, Winter, Spring, ASSOCIATE PROFESSOR HARVEY, ASSISTANT PROFESSORS RETZER AND CLARK AND DR. SWIFT.

Courses 1 and 2.—Dissection of upper and lower extremities. 1½Mjs.

Course 3.—Dissection of thorax and abdomen. 1Mj.

Course 4.—Dissection of head and neck. 1Mj.

7. Topographical Anatomy.—A laboratory course in human anatomy including regional dissection and the study of models, preparations, and sections. Prerequisite: courses 1, 2, 3, 4. Laboratory fee, \$5.00. Mj. Summer, ASSISTANT PROFESSOR RETZER.

10. Histology.—A brief course on the structure of the cell and elementary tissues will be followed by a systematic study of the structure of organs. Laboratory fee, \$5.00. Mj. Summer, ASSISTANT PROFESSOR CLARK AND MR. KEYS; Autumn and Winter, PROFESSOR BENSLEY, ASSISTANT PROFESSORS KYES AND BARTELMEZ AND OTHERS.

10A. Histology.—A supplementary course to course 10. ½Mj. Autumn, ASSISTANT PROFESSOR BARTELMEZ.

11. Advanced Histology.—Laboratory fee, \$5.00. Mj. Autumn, PROFESSOR BENSLEY.

12. Advanced Histology.—Structure of the uro-genital system. Prerequisite: course 10. Hours to be arranged. Mj. Winter, ASSISTANT PROFESSOR CLARK.

16. Elementary Neurology.—An elementary course on the structure of the central nervous system. Laboratory fee, \$5.00. Mj. Autumn, PROFESSOR HERRICK.

17. Gross and Microscopic Anatomy of the Nervous System.—An introductory course for medical students and others. Prerequisite: course 10. Laboratory fee, \$5.00. Mj. Summer, PROFESSOR COGHILL AND MR. WATKINS; Winter and Spring, PROFESSOR HERRICK, ASSISTANT PROFESSORS KYES AND BARTELMEZ AND OTHERS.

18. Neurology.—Course 17 continued. Mj. Spring, PROFESSOR HERRICK.

II. GRADUATE COURSES

19. Cytology of the Nerve Cells.—Hours to be arranged. Mj. Winter, ASSISTANT PROFESSOR BARTELMEZ.

20. Development of the Skeleton.—Hours to be arranged. Mj. Spring, ASSISTANT PROFESSOR BARTELMEZ.

25. Comparative Neurology.—The evolution of the architecture and function of the vertebrate nervous system. Prerequisite: course 16 or 17. Mj. Autumn, PROFESSOR HERRICK.

28, 29, 30. Neurological Research.—Admission to these courses may be obtained only after consultation with the Professor of Neurology. A good knowledge of general anatomy, physiology, and neurology will be required. 3Mjs. or 3DMjs. Summer, PROFESSOR COGHILL; Autumn, Winter, and Spring, PROFESSOR HERRICK.

31. Course in Immunity.—Immunization of animals: Cytolysis (including hemolysis and bacteriolysis), agglutination, toxins, etc. An experimentation and conference course. Prerequisite: Bacteriology and General Pathology. Hours to be arranged. Mj. or DMj. Autumn and Spring, ASSISTANT PROFESSOR KYES.

32. Research in Immunity.—Open to a restricted number of qualified investigators. Mj. or DMj. Autumn, Winter, and Spring, ASSISTANT PROFESSOR KYES.

36. Histology of Secretion.—In this course the changes exhibited by different secreting glands in various phases of functional activity will be studied. Mj. Winter, PROFESSOR BENSLEY.

37. Histology of the Organs of Internal Secretion.—Mj. Spring, PROFESSOR BENSLEY.

38. Morphology of the Blood.—Mj. Spring, ASSISTANT PROFESSOR CLARK.

39. Organogeny (Human).—A practical course on the development of organs in the human embryo. Prerequisite: Vertebrate Embryology. Laboratory fee, \$5.00. Mj. Spring, ASSISTANT PROFESSOR BARTELMEZ.

40. Advanced Work.—Opportunities are afforded for advanced work in all branches of anatomy. Laboratory fee, \$5.00 per Mj. PROFESSORS BENSLEY AND HERRICK, ASSOCIATE PROFESSOR HARVEY, ASSISTANT PROFESSOR RETZER.

41, 42, 43. Research Work.—The laboratory is equipped for the investigation of anatomical problems. Suitably trained persons, who have the time to do such work, will be encouraged to undertake it. PROFESSOR BENSLEY, ASSOCIATE PROFESSOR HARVEY, ASSISTANT PROFESSOR RETZER.

45, 46, 47. Seminar.—A limited number of students may, by arrangement with the Professors of Anatomy, be admitted to a seminar in which subjects of current interest in anatomy will be discussed. $\frac{1}{2}$ Mj. Autumn, Winter, and Spring, PROFESSORS BENSLEY AND HERRICK.

XXII. THE DEPARTMENT OF ZOÖLOGY

OFFICERS OF INSTRUCTION

FRANK RATTRAY LILLIE, PH.D., Professor of Embryology and Chairman of the Department of Zoölogy.

CHARLES MANNING CHILD, PH.D., Associate Professor of Zoölogy.

WILLIAM LAWRENCE TOWER, S.B., Associate Professor of Zoölogy.

HORATIO HACKETT NEWMAN, PH.D., Associate Professor of Zoölogy.

MORRIS MILLER WELLS, PH.D., Instructor in Zoölogy.

LEWIS VICTOR HEILBRUNN, PH.D., Associate in Zoölogy.

JOHN WOOD MACARTHUR, A.M., Associate in Zoölogy.
 LIBBIE HENRIETTA HYMAN, Ph.D., Laboratory Assistant.
 WESLEY C. BECKER, S.B., Laboratory Assistant.

SAMUEL WENDELL WILLISTON, M.D., Ph.D., Professor of Paleontology.

FELLOW, 1915-16

CATHARINE LINES CHAPIN, A.B.

INTRODUCTORY

The courses in Zoölogy aim to meet the needs of those students who desire to obtain some knowledge of Zoölogy as part of their general education, those who need work in Zoölogy to satisfy the requirements of other departments, and those who propose to specialize in Zoölogy. The leading purpose of the courses is to present the subject-matter of the science, its guiding ideas, its principal subdivisions, its scope, methods, and history, and its relations to other sciences.

Undergraduate work in Zoölogy.—It is advisable that students who propose to specialize in Zoölogy should obtain a broad scientific foundation, including work in the cognate sciences, and a reading knowledge of German and French. More specifically, students specializing in Zoölogy should take 4 or 5 majors in Chemistry, 2 or 3 in Physics, and 1 or 2 in Geology; they should also obtain knowledge of the general principles of microscopical Anatomy, Paleontology, Botany, and Physiology. These courses may be taken concurrently with the work in Zoölogy. Consultation with reference to the sequence of courses taken in the Department is required. (See the *Undergraduate Course Book*.)

Graduate work in Zoölogy.—Students proposing to undertake graduate work in Zoölogy should have credit for from eight to ten of the undergraduate majors in Zoölogy or their equivalent. They should also be grounded in other sciences as noted above; and a reading knowledge of German and French is required for candidacy for the degree of Doctor of Philosophy. The plan of the graduate courses involves three or four majors of formal courses and three majors or more of seminar courses in addition to research work. For the degree of Doctor of Philosophy the research work will usually extend over a period of three years. For the Master's degree Zoölogy 1, 3 or 5, 15, 16, and 17 or their equivalent, eight majors of graduate work, and a dissertation are required.

The Zoölogical Club.—The members of the staff and the advanced students of the Department form a club which meets weekly for the presentation of the research work of members of the Department, and for review and discussion of important new literature. The meetings are open to all students in the Department.

COURSES OF INSTRUCTION

Zoölogy 1 or its equivalent is prerequisite for all the Senior College courses in the Department. But courses 3 or 5 may be accepted as its equivalent for advanced work in the Department at the option of the instructor offering advanced courses.

I. JUNIOR COLLEGE COURSES

1. Elementary Zoölogy.—Lectures and laboratory work constituting an introduction to the general principles and concepts of Zoölogy. Laboratory fee, \$5.00. Mj. Autumn, ASSOCIATE PROFESSOR NEWMAN AND DR. WELLS; Winter, PROFESSOR LILLIE AND DR. HEILBRUNN; DM. Summer, First Term, ASSOCIATE PROFESSOR NEWMAN; Second Term, MR. MACARTHUR.

3. Evolution, Genetics, and Eugenics.—An elementary course dealing with the history and principles of Evolution and Genetics and their application to modern experimental evolution and eugenics. Lectures, reading, and recitations. Mj. Summer and Autumn, ASSOCIATE PROFESSOR TOWER AND MR. MACARTHUR.

4. Economic and Systematic Entomology.—The economic and systematic relations of insects. Forms of economic significance will be observed and studied in the field while emphasis will be laid upon classification, characters, and methods in the laboratory. Prerequisite: Zoölogy 1. Laboratory fee, \$2.50 per M. Mj. Summer; M. First Term or Second Term or DM. if taken in conjunction with Zoölogy 26; DR. WELLS.

5. Evolution and Heredity (Introductory course).—A lecture course dealing with evidences of organic evolution, human evolution, the history of the evolution idea and its modern applications, the factors of racial descent, the physical basis and the laws of variation and heredity, modern experimental evolution, eugenic measures, etc. Lectures, with demonstrations, 4 hours a week; recitation or quiz, 1 hour a week. Mj. Spring, ASSOCIATE PROFESSOR NEWMAN.

7. Elementary Field Zoölogy.—The classification, habits, life-histories, metamorphosis, and ecological relations of animals met with in the field. Laboratory fee, \$5.00. Mj. Spring, DR. WELLS.

II. SENIOR COLLEGE COURSES

NOTE.—Courses 15, 16, and 17 constitute a sequence running through the year. In special cases students who have credit for Botany 1, or who have studied zoölogy in high school, may be admitted to the sequence without other prerequisites. Permission for such registration must be secured from the Department.

15. Invertebrate Zoölogy.—Study of representatives of the lower invertebrate groups, including the anatomy of the adult and the life-history, together with some discussion of the habits and distribution. Prerequisite: Zoölogy 1 or 3 or 5. Lectures, laboratory work, and demonstrations. Laboratory fee, \$5.00. Mj. Autumn, ASSOCIATE PROFESSOR CHILD.

16. Invertebrate Zoölogy.—Comparative anatomy, development, and phylogeny of invertebrate groups not considered in courses 1 or 15. Prerequisite: Zoölogy 1 or equivalent. Laboratory fee, \$5.00. Mj. Winter, ASSOCIATE PROFESSOR NEWMAN.

17. Vertebrate Zoölogy.—Comparative anatomy, development, and phylogeny of vertebrates. Prerequisite: Zoölogy 1 or 5 or equivalent. Laboratory fee, \$5.00. DM. Second Term, Summer, MR. BROWN; Mj. Winter and Spring, ASSOCIATE PROFESSOR NEWMAN.

18. Embryology.—The early stages of development of invertebrates and vertebrates, including maturation and fertilization of the ovum, cleavage, and the formation of the germ layers; origin of the embryo. Embryological theories. Embryological technique. Prerequisite: Zoölogy 15, 16, 17, or their equivalents. Laboratory fee, \$5.00. Mj. Autumn, PROFESSOR LILLIE.

19. Embryology.—Continuation of course 18. Later development; especially of vertebrates. Prerequisite: Zoölogy 18. Laboratory fee, \$5.00. Mj. Winter, PROFESSOR LILLIE.

20. Vertebrate Embryology (For Medical Students).—Birds and mammals. Lectures, demonstrations, and laboratory work. Prerequisite: Zoölogy 1 and

Anatomy 10 or their equivalents; Zoölogy 17 strongly advised. Laboratory fee, \$5.00. Mj. Autumn, DR. HEILBRUNN; Mj. Spring, PROFESSOR LILLIE, DR. HEILBRUNN, AND ASSISTANTS.

21. Vertebrate Embryology.—Lectures, 3 hours a week; demonstrations and laboratory work, 6 hours a week. Prerequisite: same as for course 20. Laboratory fee, \$5.00. Mj. Summer, MR. BROWN.

24. Animal Behavior.—A course dealing with the distribution, behavior, and physiology of animals in general, but with particular reference to the invertebrates and lower vertebrates. Prerequisite: Zoölogy 1. Laboratory fee, \$5.00. Mj. Autumn, DR. WELLS.

25. Animal Ecology.—The distribution of animals, both local and world-wide. A study of the forms found in the Chicago area is made and the ecological succession worked out. Lectures, 2 hours a week, field work, 8 hours a week. Prerequisite: Zoölogy 1, 15, and 16. Laboratory fee, \$5.00. Mj. Spring, DR. WELLS.

26. Animal Behavior and Ecology.—A course dealing with the distribution, behavior, and physiology of animals in general, but with particular reference to the invertebrates and lower vertebrates. Prerequisite: Zoölogy 1. Laboratory fee, \$2.50 per M. Mj. (or M. First Term) Summer, or DM. if taken in connection with course 4; DR. WELLS.

27. Parasitology.—Animal parasites in their economic relations to man. Deals with the biological importance and origin of the parasitic habit, its occurrence in the different animal groups, and its place in the science of medicine. Prerequisite: Zoölogy 1 and 17. Laboratory fee, \$5.00. Mj. Winter, DR. WELLS. [Not given in 1916.]

28. Entomology.—The morphology, classification, habits, life-histories, and economic relations of insects. Prerequisite: Zoölogy 1 and 17. Laboratory fee, \$5.00. Mj. Winter, DR. WELLS. [Not given in 1916.]

30. Genetics and Experimental Evolution.—The course deals with animal and plant forms, and both will be used to illustrate the principles of Genetics, and the problems of Experimental Evolution. The course is intended to provide opportunity for practical work and training in the use of modern genetic operations, and as an introduction to research. Laboratory, conferences, lectures. Prerequisite: Zoölogy 1 and 3 (or 5), Botany 1, or their equivalent. Laboratory fee, \$5.00. Mj. or DMj. each Quarter, ASSOCIATE PROFESSOR TOWER AND MR. MACARTHUR.

31A, B, C. Course 30 continued. Each Quarter.

NOTE.—Courses 30 and 31A, B, and C are planned to run continuously throughout the year and work may be started at the beginning of any quarter. The work of the course is entirely individual, each student is given a problem, in either the laboratory or library, or both, but students will have opportunity to observe several different lines of work.

33-35. Physiological Zoölogy.—The course is concerned with the physiological and dynamic aspects of zoölogy and consists primarily of laboratory work, which is supplemented by conferences and reading. Individual work intended as training in methods, illustrations of principles, and preparation for research is assigned to each student. Work may begin in any quarter. Prerequisite: Zoölogy 1 (or 15), 16, 17, or their equivalent. Laboratory fee, \$5.00. Mj. or DMj. each Quarter, Autumn, Winter, and Spring, ASSOCIATE PROFESSOR CHILD.

36. Advanced Vertebrate Zoölogy.—Lectures and demonstrations on the natural history, evolution, migration, and distribution of vertebrates, living and extinct. Fishes and amphibia. Prerequisite: Zoölogy 16 and 17. Laboratory fee, \$5.00. Mj. Autumn, PROFESSOR WILLISTON.

37. Advanced Vertebrate Zoölogy.—Lectures and demonstrations on the natural history, evolution, migration, and distribution of vertebrates. Reptiles and birds. Laboratory fee, \$5.00. Mj. Winter, PROFESSOR WILLISTON.

38. Advanced Vertebrate Zoölogy.—Lectures and demonstrations on the natural history, evolution, migration, and distribution of vertebrates, living and extinct. Mammals. Laboratory fee, \$5.00. Mj. Spring, PROFESSOR WILLISTON.

39. Marine Biology (at the Marine Biological Laboratory at Woods Hole, Mass.)—Credit is given at the University of Chicago for courses taken at this laboratory. DMj. Summer, PROFESSOR LILLIE AND ASSOCIATE PROFESSOR NEWMAN.

40. The Teaching of Zoölogy.—This course touches briefly the history of the introduction of science teaching and the significance of the movement, and discusses present tendencies, courses of study, textbooks, and the principles involved in the selection of subject-matter, its arrangement, and presentation. M. Summer, First Term, ASSISTANT PROFESSOR DOWNING.

III. GRADUATE COURSES

45. Physiology of Development.—A consideration of existing data and views as material for a theory of development and heredity. Lectures, conferences, assigned topics. Prerequisite: Zoölogy 19. Mj. Autumn, PROFESSOR LILLIE.

46. Organic Evolution.—Lectures, library work, and demonstrations on (1) growth of the evolution idea, modern evolution theories; (2) the factors in evolution; (3) results obtained in experimental evolution. Prerequisite: Zoölogy 45. Mj. or DMj. Winter, ASSOCIATE PROFESSOR TOWER.

47. Physiology of Regulation and Reproduction.—Discussion and analysis of the chief facts and theories of form-regulation. The relation between experimental regulation and reproduction in nature. The conditions which initiate reproduction. The work of the course will consist of lectures, reports, discussions, and quizzes. Mj. Spring, ASSOCIATE PROFESSOR CHILD.

48. Cytological Problems.—Among the subjects considered are: morphology and physiology of the cell, cell-division, the cell and the organism in growth, reproduction, and regulation, the various methods of cytological research, their objects, and their value. The work of the course consists of lectures, reports, discussions, and quizzes. Mj. Spring, ASSOCIATE PROFESSOR CHILD.

49. Problems in Animal Morphology and Phylogeny.—A course in methods of research for advanced undergraduate and first-year graduate students. Individual instruction and advice will be given as to methods of attacking problems, sources of literature, etc. Simple practice problems will be assigned if desired. M. First Term, Autumn, ASSOCIATE PROFESSOR NEWMAN.

IV. SEMINAR COURSES

60. Problems of Fertilization (Seminar).—A consideration of the historical development and present status of the problems of fertilization. Prerequisite: Zoölogy 45, 46, and either 47 or 48. Mj. Spring, PROFESSOR LILLIE.

60A. The Biology of Sex.—A consideration of the biological problems of sex, more especially from the cytological point of view. Prerequisite: Zoölogy 45, 46, and either 47 or 48. Mj. Spring, PROFESSOR LILLIE. [Not given in 1916.]

61. Bionomic Problems.—The problems of evolution with reference to their relation to external factors, to distribution, and to the interrelation of organisms will be considered. Prerequisite: Zoölogy 45, 46, and either 47 or 48. Mj. or DMj. Autumn, ASSOCIATE PROFESSOR TOWER. [Not given in 1915.]

61A. Genetics.—The problems of heredity in relation to genetics, to plant and animal breeding, and to eugenics. Prerequisite: same as for course 61. Mj. or DMj. Autumn, ASSOCIATE PROFESSOR TOWER.

63. The Problem of Reproduction in Organisms.—A study of the facts and theories concerning the various methods of reproduction in organisms; the effect

of physiological and physical isolation of parts in nature and experiment; the germ-plasm theory in relation to the data of observation and experiments. Special topics will be assigned to each student for report and discussion. Prerequisite: Zoölogy 45, 46, and 47, or their equivalent. Mj. Winter, ASSOCIATE PROFESSOR CHILD.

64. Senescence and Rejuvenescence.—A study of the facts and theories bearing upon the problem of age in organisms. The physiological and structural changes during aging. The question of rejuvenescence. Prerequisite: Zoölogy 45, 46, and 47 or 48, or their equivalent. Mj. Winter, ASSOCIATE PROFESSOR CHILD. [Not given in 1916.]

V. RESEARCH COURSES

70. Zoölogical Problems.—Research at the Marine Biological Laboratory, Woods Hole, Mass. Prerequisite: such of the elementary courses as are essential to the special topic undertaken. 2 or 3Mjs. Summer, PROFESSOR LILLIE AND ASSOCIATE PROFESSOR NEWMAN.

71. Zoölogical Problems.—Research. Laboratory fee, \$5.00. 1 to 3Mjs. Summer, ASSOCIATE PROFESSORS TOWER, NEWMAN, AND OTHERS.

72, 73, 74. Zoölogical Problems.—Research work. For graduate students. Prerequisite: training essential to the special topic undertaken. Laboratory fee, \$5.00. 1 to 3Mjs. Autumn, Winter, and Spring, PROFESSOR LILLIE, ASSOCIATE PROFESSORS CHILD, TOWER, NEWMAN, AND OTHERS.

XXIV. THE DEPARTMENT OF PHYSIOLOGY

(Including Physiology, Physiological Chemistry, and Pharmacology)

OFFICERS OF INSTRUCTION

ALBERT PRESCOTT MATHEWS, PH.D., Professor of Physiological Chemistry.
 ANTON JULIUS CARLSON, PH.D., Associate Professor of Physiology.
 DAVID JUDSON LINGLE, PH.D., Assistant Professor of Physiology.
 FRED CONRAD KOCH, PH.D., Assistant Professor of Physiological Chemistry.
 ARNO BENEDICT LUCKHARDT, PH.D., M.D., Assistant Professor of Physiology.
 FRANK CHRISTIAN BECHT, PH.D., Assistant Professor of Pharmacology.
 SHIRO TASHIRO, PH.D., Instructor in Physiological Chemistry.
 HAROLD STANARD ADAMS, PH.D., Associate in Physiological Chemistry.
 HARVEY RAYMOND BASINGER, S.B., Associate in Physiology.
 EVA ORMENTA SCHLEY, PH.D., Assistant in Physiology.
 LEROY HENDRICK SLOAN, S.B., Assistant in Physiology.
 LEO LEWIS HARDT, S.B., Assistant in Physiology.
 ROBERT WOOD KEETON, S.M., Assistant in Physiology.
 JOSEPH OLIVER BALCAR, S.B., Assistant in Physiological Chemistry.
 SIEGFRIED MAURER, S.B., Assistant in Physiological Chemistry.
 BENJAMIN HARRY HAGER, Assistant in Pharmacology.
 GEORGE EMANUEL BURGET, S.B., Assistant in Pharmacology.
 AUGUST JOHNSON, Mechanic.

FELLOWS, 1915-16

JOHN MÖLLER JANSON, S.M.
 GEORGE FRED SUTHERLAND, A.M.

LLOYD KENDRICK RIGGS, S.B.

INTRODUCTORY

The courses of the Department of Physiology are arranged for three classes of students:

I. Junior or Senior College students who wish to acquire a knowledge of the structure and functions of the human body, or who wish to study biology from the physiological side. To satisfy the needs of these students and enable them to cover the subject satisfactorily, a three-major course is given: courses 1, 2, and 3, Introductory Physiology. In order to make it accessible to a large number of students no prerequisites are demanded.¹

II. Students wishing to specialize in Physiology, Physiological Chemistry, or Pharmacology, or students of other biological sciences who wish to take minor work in Physiology.

III. Medical students. This work is covered by courses 12, 13, 14, 19, 20, and 21.

For all courses except 1, 2, 3, and 4, General Biology 1 and 17, or an equivalent course, is prerequisite. For each major or double-minor course requiring laboratory work, the laboratory fee is \$5.00.

THE BACHELOR'S DEGREE

Senior College students wishing to take their S.B. degree in Physiology should take courses 1, 2, 12, 13, 14, 19, and 20; or in lieu of 19 and 20, courses 24, 25, and 26. Courses in Chemistry, Physics, Histology, Embryology, and Plant Physiology to the extent of three to four majors may be accepted as part of the total of nine majors required for graduation.

THE MASTER'S DEGREE

The requirements for the Master's degree, if all the work is taken in this Department, are: (1) Research, three majors (courses 42, 43, or 44); (2) six majors from the Graduate or Senior College courses; (3) thesis. The Senior College courses that may be counted toward the Master's degree are 12, 13, 14, 19, 20, 21, 24, 25, 26.

THE DEGREE OF DOCTOR OF PHILOSOPHY

Courses 12, 13, 14, 19, and 20, or their equivalents, are required of all candidates for the Doctor's degree, with Physiology as the major subject. The further selection of courses depends on whether Physiology or Physiological Chemistry is the principal subject, and is arranged in each case by consultation.

REQUIREMENT FOR A MINOR IN PHYSIOLOGICAL CHEMISTRY

For students taking a full minor in Physiological Chemistry three majors will be credited for work equivalent to courses 12, 13, and 14 in Physiology, or other courses in General and Comparative Physiology, taken elsewhere; and in addition six majors selected from courses 24, 25, 26, 37, 38, 39, and 42. For students taking a partial minor in Physiological Chemistry the equivalent of three majors work in Physiology or Physiological Chemistry taken elsewhere will be accepted in partial fulfillment of the requirement; in addition three majors selected from courses 24, 25, 26, 37, 38, 39, 42, or 54.

¹ Students who wish to get the most possible out of the course are strongly urged to acquire some chemical knowledge before beginning the work. As the accommodations are limited, preference in registration will be given to those students who will arrange their work so as to be able to take 1, 2, and 3.

COURSES OF INSTRUCTION

I. JUNIOR COLLEGE COURSES

Courses 1, 2, and 3 are intended to familiarize the student with the facts concerning the structure and functions of the human body. Students are urged to take all three courses.

1. Physiology of Blood, Respiration, Digestion, Secretion, and Absorption.—Lectures and laboratory. Laboratory fee, \$5.00. Mj. Autumn and Winter, ASSISTANT PROFESSOR LINGLE AND DR. SCHLEY.

2. Physiology of Circulation.—Muscle, peripheral nerves, animal heat, excretion. Laboratory fee, \$5.00. Mj. Winter and Spring, ASSISTANT PROFESSOR LINGLE AND DR. SCHLEY.

3. Physiology of the Brain, Cord, Eye, Ear.—Sense of taste, smell, pressure, temperature, and muscle sense. Laboratory fee, \$5.00. Mj. Spring and Autumn, ASSISTANT PROFESSOR LINGLE AND DR. SCHLEY.

4. Human Physiology.—Selected topics especially adapted to teachers. Lectures and laboratory work. Laboratory fee, \$5.00. Mj. Summer, MR. KEETON.

II. SENIOR COLLEGE COURSES

12.¹ Physiology of Blood, Circulation, and Respiration.—Lectures and recitations, 3 hours a week; laboratory work, 6 hours a week. Prerequisite: Physiological Chemistry. Laboratory fee, \$5.00. Mj. Spring, ASSOCIATE PROFESSOR CARLSON, ASSISTANT PROFESSORS LUCKHARDT AND BECHT, AND MESSRS. SLOAN HARDT, BURGET, AND HAGER.

13.¹ Physiology of Digestion, Metabolism, Absorption, Secretion, Excretion, Muscles, and Heat.—Lectures and recitations, 3 hours a week; laboratory, 6 hours a week. Prerequisite: Physiology 12. Laboratory fee, \$5.00. Mj. Autumn, ASSOCIATE PROFESSOR CARLSON, ASSISTANT PROFESSORS LUCKHARDT AND BECHT, AND MESSRS. SLOAN, HARDT, AND BURGET.

14.¹ Physiology of the Nervous System and the Senses.—Lectures, two a week; recitation and conference, one a week; laboratory, 6 hours a week. Prerequisite: Neurology 3. Laboratory fee, \$5.00. Mj. Winter, ASSOCIATE PROFESSOR CARLSON, ASSISTANT PROFESSOR LUCKHARDT, AND MESSRS. SLOAN AND HARDT.

16. Special Physiology of Mammals.—Including the experiments not given in the general courses. Prerequisite: Physiology 12, 13, or 14, or equivalent. Laboratory fee, \$2.50. $\frac{1}{2}$ Mj. Summer and Autumn, ASSISTANT PROFESSOR LUCKHARDT.

18. The Principles of Physiology (as they are applied to the clinical examination of the central nervous system and special senses).—Laboratory fee, \$2.50. $\frac{1}{2}$ Mj. Spring and Summer, ASSISTANT PROFESSOR LUCKHARDT.

19.² Physiological Chemistry.—Chemistry of the carbohydrates, lipoids, and proteins and the general chemistry of the cell. Lectures, two a week; recitations, one a week; laboratory, 6 hours a week. Prerequisite: General Chemistry, Qualitative Analysis, and Elementary Organic Chemistry. Quantitative Analysis recommended. Laboratory fee, \$5.00. Mj. Winter, PROFESSOR MATHEWS AND DR. ADAMS; Summer, ASSISTANT PROFESSOR KOCH AND DR. ADAMS.

20.² Physiological Chemistry.—Chemistry of digestion, metabolism, and excretion. Lectures and recitations, three a week; laboratory, 6 hours a week. Prerequisite: course 19. Laboratory fee, \$5.00. Mj. Autumn, ASSISTANT PROFESSOR KOCH AND DR. TASHIRO; Spring, PROFESSOR MATHEWS AND DR. ADAMS.

¹ One of courses 12, 13, or 14 will be repeated in the Summer Quarter. The choice will depend upon the requirements of the majority of the applicants.

² Courses 19 and 20 are required of medical students for credit in Physiological Chemistry.

III. PRIMARILY FOR GRADUATE STUDENTS

21. Pharmacology.—Lectures, three a week; recitations, two a week; laboratory, 7 hours a week. Prerequisite: Physiology 12, 13, 14, 19, 20. Laboratory fee, \$5.00. Mj. Winter; repeated, Summer, ASSISTANT PROFESSOR BECHT AND MR. HAGER.

24. Physiological Chemistry.—Chemistry of the cell constituents, carbohydrates, lipoids, proteins, nucleins. Essentially a repetition of course 19 in the Autumn Quarter for graduate students and students taking undergraduate major work in physiology. Prerequisites as in 19. Assigned readings. Seminar, once a week; laboratory, physiological-chemical preparations, 6 hours a week. Laboratory fee, \$5.00. Mj. Autumn, PROFESSOR MATHEWS AND DR. ADAMS.

25. Chemistry of Digestion.—Action of enzymes; digestion; the tissues. A continuation of course 24. Lectures and laboratory as in course 24. Prerequisite: course 24. Laboratory fee, \$5.00. Mj. Winter, PROFESSOR MATHEWS AND ASSISTANT PROFESSOR KOCH.

26. Chemistry of Metabolism, Nutrition, and the Urine.—Continuation of course 25. Prerequisite: course 25 or its equivalent. Laboratory fee, \$5.00. Lectures and laboratory as in course 24. Mj. Spring, PROFESSOR MATHEWS AND DR. ADAMS.

31. Special Physiology of the Digestive Tract.—Laboratory fee, \$5.00. Mj. Spring and Summer, ASSOCIATE PROFESSOR CARLSON AND _____.

32. Special Physiology of the Glands of Internal Secretion.—Laboratory fee, \$5.00. Mj. Autumn and Winter, ASSOCIATE PROFESSOR CARLSON AND MR. _____.

33. General and Comparative Physiology.—Lectures and laboratory. Laboratory fee, \$5.00. Mj. Summer and Autumn, ASSISTANT PROFESSOR LINGLE.

34. Advanced Physiology of the Central Nervous System.—Prerequisite: Physiology 14. Laboratory fee, \$5.00. Mj. Spring, ASSOCIATE PROFESSOR CARLSON AND _____.

37. Methods of Quantitative Analysis in Physiological Chemistry as Applied to Plant and Animal Tissues.—Laboratory fee, \$5.00. Mj. Winter and Summer, ASSISTANT PROFESSOR KOCH.

38. Methods of Quantitative Analysis in Physiological Chemistry as Applied to Plant and Animal Tissues (continued).—Laboratory fee, \$5.00. Mj. Autumn and Winter, ASSISTANT PROFESSOR KOCH.

39. Quantitative Micro-chemical Methods for Studying Cell-Respiration.—Laboratory fee, \$5.00. Mj. or DMj. Autumn, Winter, and Spring, DR. TASHIRO.

40. Seminar: in Biochemistry.—Weekly. PROFESSOR MATHEWS, ASSISTANT PROFESSOR KOCH, DR. TASHIRO, AND DR. ADAMS.

41. Seminar: in Physiology and Pharmacology.—Fortnightly. Mj. Summer, Autumn, Winter, and Spring, ASSOCIATE PROFESSOR CARLSON AND ASSISTANT PROFESSORS LINGLE, LUCKHARDT, AND BECHT.

42. Research Work in Physiological Chemistry.—Mj. or DMj. each Quarter, PROFESSOR MATHEWS, ASSISTANT PROFESSOR KOCH, AND DR. TASHIRO.

43. Research Work in Pharmacology.—Mj. or DMj. each Quarter, ASSISTANT PROFESSOR BECHT.

44. Research Work in Physiology.—Mj. or DMj. each Quarter, ASSOCIATE PROFESSOR CARLSON AND ASSISTANT PROFESSORS LUCKHARDT AND BECHT.

54. General and Comparative Physiology (at the Marine Laboratory, at Woods Hole, Mass.).—Credit is given by the University of Chicago for courses taken at this laboratory. DMj. Summer, PROFESSOR MATHEWS.

I A. THE DEPARTMENT OF PSYCHOLOGY

OFFICERS OF INSTRUCTION

JAMES ROWLAND ANGELL, A.M., Professor and Head of the Department of Psychology; Director of the Psychological Laboratory; Dean of the Faculties of Arts, Literature, and Science.

HARVEY CARR, PH.D., Assistant Professor of Experimental Psychology.

JOSEPH WANTON HAYES, PH.D., Instructor in Psychology.

ELLSWORTH FARIS, PH.D., Instructor in Psychology (Summer, 1915).

INTRODUCTORY

The courses in the Department are planned with three purposes in view: (1) to meet the needs of undergraduate students who desire an intelligent acquaintance with the general principles of Psychology and their bearing upon the larger social and scientific interests of modern life; (2) to afford adequate discipline for students who wish to employ Psychology as a basis for higher work in philosophy, education, and the social sciences; (3) to furnish a sound and symmetrical training for teachers, investigators, and specialists in the various branches of psychological science.

The importance to the physician of a knowledge of modern scientific Psychology, and the great utility of such knowledge in medical practice, becomes daily more evident. The following courses are offered as adapted to the needs of medical students and practitioners.

COURSES OF INSTRUCTION

1. Introductory Psychology.—Repeated every Quarter. Mj. every Quarter. Summer, 9:00, ASSISTANT PROFESSOR CARR AND DR. HAYES; Autumn, 3 sections: 9:15, 10:45, 1:30, ———; Winter, 9:15, ———; Spring, 9:15, ———.

NOTE.—This course is a prerequisite for all other courses in the Department and may be taken by students in the Junior Colleges who have completed nine majors of work.

2, 3, 4. Experimental Psychology.—Training course. This course is designed to afford students preliminary training for independent research and for teaching this branch. It is distinctly a laboratory course. Students specializing in psychology are advised to take this course immediately after the completion of course 1. The course may be entered at the beginning of any of the three quarters. The work is, however, closely connected, and the department strongly recommends adherence to the regular sequence, as indicated in the course numbers. Lectures: 2:30–3:30; laboratory work: 2:30–4:30. 3Mjs. Autumn, Winter, and Spring, ASSISTANT PROFESSOR CARR.

NOTE.—Lectures and laboratory work occur on different days.

Course 2: Will be given to the study of visual sensations, introduced by a general presentation of psychological methods and an outline sketch of the operations of the nervous system. Autumn.

Course 3: Will be devoted to the study of auditory, cutaneous, kinaesthetic, gustatory, and olfactory sensations. Winter.

Course 4: Will consider the application of experimental methods to the study of the more complex processes of consciousness. Spring.

NOTE.—These three courses are given in rotation in successive summers, so that the year's work may be obtained by students who are in residence only in the summer.

5. Outlines of Experimental Psychology (A Demonstration Course).—

This course is intended to give students a general introductory acquaintance with the methods and results of experimental psychology. Lectures, class demonstrations, assigned readings, with opportunity for individual experimental work. Should not be taken by students expecting to elect courses 2-4. Prerequisite: course 1. Mj. Winter, DR. HAYES.

7. Abnormal Psychology.—A study of the variants of normal consciousness involved in hysteria, multiple personality, dreams, hypnotism, mediumistic phenomena, etc., with particular reference to their bearing on normal mental processes. Mj. Autumn, DR. HAYES.

III. DEPARTMENT OF CHEMISTRY, MATERIA MEDICA, AND TOXICOLOGY*†

(INCLUDING MEDICAL PHARMACY; AND COURSES IN DEPARTMENT XX, CHEMISTRY,
AT THE UNIVERSITY OF CHICAGO)

*Department of Chemistry, Toxicology, Materia Medica, and Medical Pharmacy
at Rush Medical College*

OFFICERS OF INSTRUCTION

AT RUSH MEDICAL COLLEGE

WALTER STANLEY HAINES, A.M., M.D., Professor and Head of the Department.

Department of Chemistry, University of Chicago

OFFICERS OF INSTRUCTION

AT THE UNIVERSITY OF CHICAGO

JOHN ULRIC NEF, PH.D., Professor and Head of the Department of Chemistry.

JULIUS STIEGLITZ, PH.D., Sc.D., Professor of Chemistry and Director of Analytical Chemistry.

HERBERT NEWBY MCCOY, PH.D., Professor of Chemistry.

WILLIAM DRAPER HARKINS, PH.D., Associate Professor of Chemistry.

HERMANN IRVING SCHLESINGER, PH.D., Assistant Professor of Chemistry.

LEMUEL CHARLES RAIFORD, PH.D., Instructor in Chemistry.

ETHEL MARY TERRY, PH.D., Instructor in Chemistry.

JOHN WILLIAM EDWARD GLATTFELD, PH.D., Research Instructor in Chemistry.

OSCAR FRED HEDENBURG, A.B., Research Instructor in Chemistry.

STANLEY DAVIS WILSON, A.B., A.M., Instructor in Quantitative Analysis.

ARTHUR BUDD CARTER, PH.C., Curator.

RAYMOND DAVID MULLINIX, S.B., Associate and Lecture Assistant.

DENTON J. BROWN, Assistant in General Chemistry.

WILBY T. GOOCH, S.B., Assistant in General Organic Chemistry.

EDMUND CHARLES HUMPHERY, S.B., S.M., Assistant in General Chemistry.

EDWIN DANIEL LEMAN, S.B., Assistant in Physical Chemistry.

JOHN TENNYSON MYERS, S.M., Assistant in Quantitative Analysis.

* For courses in Physiological Chemistry see the Department of Phys ology.

† The courses in Physics recommended to undergraduate students preparing to study medicine are the following courses offered in the Department of Physics.

WILLIAM TUDOR PEARCE, S.B., Assistant in General Chemistry.

RENÉ DE POYEN, Assistant in Organic Chemistry.

E. D. WILSON, S.B., Assistant in General Chemistry.

SIDNEY MARSH CALDWELL, S.B., Research Assistant.

WALTER STANLEY HAINES, A.M., M.D., Professorial Lecturer on Toxicology.

FELLOWS, 1915-16

LESTER ARONBERG, S.B.

QUAESITA CORNWELL DRAKE, A.M.

LEO FINKELSTEIN, S.B.

RALPH EDWIN HALL, S.M., Swift Fellow.

MILTON THEODORE HANKE, S.B.

WILLARD ALLEN ROBERTS, S.B.

JOHN EDWARD SCHOTT, S.B.

COURSES OF INSTRUCTION IN THE DEPARTMENT OF PHYSICS

[Courses 1, 2, 3, and 4 in Physics, or a full equivalent, are required for admission to Rush Medical College, and courses 1 and 2 prerequisite for the courses in Physics are fully described in the Circular of Information of the Colleges, University of Chicago, which may be had on application.]

JUNIOR COLLEGE COURSES

1. **Elementary Physics.**—A first course in the elements of Physics designed primarily for students who do not present entrance Physics. Mj. Autumn. Classwork: M., Tu., W., 11:00-12:00; laboratory: Th., F., 11:00-1:00, ASSOCIATE PROFESSOR MANN.

2. **Elementary Physics.**—A continuation of the preceding course, covering the subjects of electricity, sound, and light. Mj. Winter. Classwork: M., Tu., W., 11:00-12:00; laboratory: Th., F., 11:00-1:00, ASSOCIATE PROFESSOR MANN.

3. **Mechanics, Molecular Physics, and Heat.**—A general college course in mechanics, molecular physics, and heat, presented mainly from the experimental standpoint. 10 hours a week. Prerequisite: Entrance Physics or Physics 1 and 2. Mj. Summer, 2 sections, MR. SOUDER; Autumn, 3 sections, ASSOCIATE PROFESSOR GALE AND DR. LEMON; Winter, ASSOCIATE PROFESSOR KINSLEY; Spring, MR. SOUDER.

4. **Electricity and Light.**—A general college course in electricity, sound, and light, presented mainly from the experimental standpoint, and involving the performance of eighteen laboratory exercises in electricity, four in sound, and six in light. Prerequisite: Physics 3. Mj. Summer, 2 sections, ASSISTANT PROFESSOR LASSALLE AND MR. DARROW; Autumn, MR. SOUDER; Mj. Winter, 3 sections, DR. LEMON AND MR. SOUDER; Mj. Spring ASSOCIATE PROFESSOR KINSLEY.

5. **Lecture Demonstration Course.**—A course of lectures, demonstrations, and recitations supplementing courses 3 and 4 and completing a year's work in college Physics. Recent discoveries and development in Physics are given especial attention. 5 hours a week. Prerequisite: Physics 4. Mj. Summer, ASSOCIATE PROFESSOR MOORE; Spring, 9:30, DR. LEMON.

INTRODUCTORY

In this Department are offered (1) courses which are suited for providing the preparation in the science of Chemistry that is indispensable to the study and practice of medicine; (2) courses which afford the student an opportunity for acquiring a more thorough and complete preparation for following intelligently the rapid advances in modern physiology and other medical subjects; and (3) courses which are indispensable for those who intend to assist in this advance by devoting themselves in part or exclusively to research in medical subjects, after completing their medical course.

REQUIREMENTS AND ELECTIVES IN CHEMISTRY

General Organic Chemistry and Qualitative Analysis are now a prerequisite to the medical courses proper. The necessary knowledge of the subject can be obtained from Chemistry 1, 2, 3, 4, and 6, or Admission Chemistry and 2S, 3S, 4, and 6.

Organic Chemistry 33 and 34 (2Mjs.), Summer Quarter, may be substituted for course 4.

Students who are preparing for the study of Medicine, and who are candidates for a Bachelor's degree in the University of Chicago, are strongly recommended to take at least two majors more of Chemistry, viz., Quantitative Analysis 8 (1Mj.), and Physical Chemistry 60 or 61.

Candidates for a Bachelor's degree who expect to do research work in Physiology or allied medical subjects may with advantage elect further courses from the following: Organic Chemistry 30, 31, 32; Physical Chemistry 62; Special Methods of Quantitative Analysis 13-19.

COURSES OF INSTRUCTION

I. PRIMARILY FOR THE JUNIOR COLLEGES

1. Elementary General Chemistry: Inorganic I.—Prerequisite: preparatory Physics. DM. Summer, First Term. Classroom, 6 hours a week; laboratory, 12 hours a week; DR. RAIFORD. Mj. Autumn. Classroom, 3 hours a week; laboratory, 6 hours a week; PROFESSOR MCCOY, DR. RAIFORD, AND MR. _____.

2. General Chemistry: Inorganic II.—(Continuation of course 1.) Prerequisite: course 1. DM. Summer, Second Term, DR. RAIFORD; Mj. Winter, ASSISTANT PROFESSOR SCHLESINGER.

NOTE.—Course 2, Winter Quarter, is a continuation of course 1, but may be entered by those having credit for admission Chemistry.

3. General Chemistry: Inorganic III.—(Continuation of course 2.) Prerequisite: course 2. Mj. Spring, ASSISTANT PROFESSOR SCHLESINGER.

NOTE.—Courses 1, 2, and 3 are consecutive courses. Separate credit is given for each, but students are not advised to take one course only. The aim of these courses is to give a definite idea of the fundamental principles of chemistry, and not to overburden the student with a mass of unconnected facts. The conception of chemical equilibrium and the modern theory of solutions are freely used. The lectures will be experimental to a considerable extent. The courses are designed to meet the wants not only of those who wish to go deeper into chemistry, but of all who wish to study the science as part of a liberal education. The lectures and classroom work of 1, 2, and 3 may be taken by graduate students without the laboratory work or laboratory fee.

2S. General Chemistry: Inorganic.—(First course.) For students who have had preparatory Chemistry. Prerequisite: preparatory Chemistry and preparatory Physics, one unit each. DM. Summer, First Term. Classroom, 6 hours a week; laboratory, 12 hours a week; ASSOCIATE PROFESSOR HARKINS. Mj. Autumn. Classroom, 3 hours a week; laboratory, 6 hours a week; ASSOCIATE PROFESSOR HARKINS.

3S. General Chemistry: Inorganic.—(Continuation of course 2S.) DM. Summer, Second Term, ASSOCIATE PROFESSOR HARKINS; Mj. Winter, ASSOCIATE PROFESSOR HARKINS.

NOTE.—Whenever, in exceptional cases, the preparation of a student in 2S justifies it, qualitative analysis may be substituted for 3S.

4. Elementary Organic Chemistry.—Prerequisite: course 3 or 3S. Classroom, 3 hours a week; laboratory, 6 hours a week; Mj. Autumn, PROFESSOR STIEGLITZ; Spring, DR. RAIFORD.

II. PRIMARILY FOR THE SENIOR COLLEGES

6. Qualitative Analysis.—(Introductory course.) The lectures deal with the chemistry of the analytical reactions, and special attention is given to the development and application of the laws of equilibrium and solutions. This course is, in an important sense, one in advanced General Chemistry. Classroom, 2 hours a week; laboratory, 8 or 16 hours a week. Prerequisite: course 3 or 3S. Mj. Summer and Autumn, ASSISTANT PROFESSOR SCHLESINGER; Winter, DR. TERRY; Spring, PROFESSOR STIEGLITZ AND DR. TERRY.

NOTE.—Courses 6, 7, and 10 form a continuous course, which may be begun in any quarter. The aim of courses 6, 7, and 10 will be to train the student to do intelligent analytical work, based on a knowledge of the scientific principles of the subject, and to apply and amplify his knowledge of General and Physical Chemistry.

7. Qualitative Analysis.—(Continuation of course 6.) Mj. or DM. Summer, ASSISTANT PROFESSOR SCHLESINGER; Autumn, Winter, and Spring, DR. TERRY.

8. Quantitative Analysis.—(Introductory course.) Chiefly laboratory work in gravimetric and volumetric analysis. Laboratory, 8 or 16 hours a week; lecture, 1 hour. Prerequisite: course 7. Medical students will be admitted to the course after having taken course 6. Mj. or DM. Summer, DR. ———; Autumn, DR. ———; Winter, PROFESSOR STIEGLITZ; Spring, DR. ———.

8M. Quantitative Analysis.—A special course for premedical and medical students giving the elements of gravimetric and volumetric analysis. Prerequisite: course 6. Summer, either Term, Autumn and Spring, $\frac{1}{2}$ Mj., MR. WILSON; Winter, $\frac{1}{2}$ Mj., PROFESSOR STIEGLITZ.

9. Quantitative Analysis.—(Continuation of course 8.) Mj. or DM. Laboratory, 10 or 20 hours a week. Mj. Summer, DR. ———; Autumn, DR. ———; Winter, PROFESSOR STIEGLITZ; Spring, DR. ———.

NOTE.—Courses 8 and 9 form a continuous course which may be begun in any quarter.

III. PRIMARILY FOR THE GRADUATE SCHOOL

10. Advanced Qualitative Analysis.—(Continuation of courses 6 and 7.) Open to Senior College students. Prerequisite: course 7. Mj. or DM. Laboratory, 10 or 20 hours a week. Summer, ASSISTANT PROFESSOR SCHLESINGER; Autumn, Winter, and Spring, DR. TERRY.

11. Advanced Quantitative Analysis.—(Continuation of courses 8 and 9.) Open to Senior College students. Mj. or DM. Laboratory, 10 or 20 hours a week. Winter, PROFESSOR STIEGLITZ.

33. General Organic Chemistry.—Fatty and aromatic series. Prerequisite: course 7. Lectures, 5 hours a week. Mj. Summer, DR. GLATTFELD.

34. Elementary Organic Preparations.—Laboratory work, 10 hours a week. This course is arranged to accompany the lectures of course 33. It may be taken without the lectures by students who have had Organic Chemistry. Prerequisite: course 7. M. or Mj. Summer, DR. GLATTFELD.

85. The Chemistry of Medicinal Drugs.—A course dealing with the physical and chemical properties of the chief medicinal drugs and their most important remedial preparations. 3 hours per week. $\frac{1}{2}$ Mj. Spring, Tu., Th., F., 4:30, PROFESSOR HAINES.

Numerous other courses are offered in the various departments of Chemistry which are fully described in the Circular of Information for the Colleges and of the Graduate Schools. Copies of these circulars may be had on application.

INSTRUCTION AT RUSH MEDICAL COLLEGE

51. Toxicology.—An advanced conference and laboratory course, dealing with the physical and chemical properties of the more important poisons, their effects and treatment, and their detection. Conferences and laboratory: Hours to be arranged. 60 hours. .8Mj. PROFESSOR HAINES.

52. Clinical Chemistry.—A lecture, conference, and laboratory course dealing with the urine, gastric contents, and other animal fluids, in their relation to disease, and embracing the composition of these fluids, the chemical and microscopical detection of abnormal constituents, and the interpretation of their clinical significance. Lectures, conferences, and laboratory: Tu., 11:00; Th., F., 10:00–12:00. 60 hours. .8Mj. PROFESSOR HAINES. [Not given in 1915–16.]

Course 52 may be counted as a part of the five and one-half required majors in Medicine.

53. Materia Medica, Medical Pharmacy, and Toxicology.—A lecture and conference course, dealing with the physical, chemical, and pharmaceutical properties of medicinal agents and their toxicology. Lectures and conferences: Autumn, M., Tu., Th., F., 2:00; Spring, Tu., W., F., Sat., 9:00. 48 hours. .8Mj. PROFESSOR HAINES.

53A. Materia Medica and Medical Pharmacy.—A laboratory course supplementary to course 53. Autumn, M., Tu., Th., F., 3:00; Spring, Tu., W., F., Sat., 10:00–11:00. 48 hours. .4Mj. PROFESSOR HAINES AND ASSISTANTS.

V. DEPARTMENT OF THERAPEUTICS AND PREVENTIVE MEDICINE

OFFICERS OF INSTRUCTION

THEODORE TIEKEN, M.D., *Ingals* Professor and Head of the Department of Therapeutics.

RALPH WALDO WEBSTER, M.D., PH.D., Assistant Professor of Pharmacological Therapeutics.

HUGO AD OLDENBORG, G.D., Assistant Professor of Kinesitherapy.

ROBERT JAMES GAY, M.D., DANIEL ROBERTS BROWER, M.D., Instructors.

CHARLES OTTO CARLSTROM, G.D., Assistant in Kinesitherapy.

INTRODUCTORY

The course in Hygiene and Sanitation is given to the Senior class and consists of lectures and conferences.

A course in the principles of Therapeutics is given to the Junior class three times a week throughout the Winter Quarter, by means of lectures and conferences. One of these hours is devoted chiefly to instruction in prescription-writing from a therapeutic standpoint. The work is continued during the Spring Quarter by means of a conference course with more special reference to individual diseases.

A course in Practical Therapeutics is offered in the Junior year in which the student is personally taught manipulative methods, including Massage, Electricity, Hydrotherapy, etc., and the practical care of the sick.

It is intended that this Department shall supplement the work of the Department of Medicine by dealing more in detail with the technique of treatment.

COURSES OF INSTRUCTION

I. JUNIOR YEAR

1. Therapeutics.—A lecture and prescription-writing course. Prerequisite: Materia Medica, III, course 53. Lectures: M., F., 8:00; prescription-writing: W., 8:00. .6Mj. Winter, ASSISTANT PROFESSOR WEBSTER.

2. Therapeutics.—A conference course on the therapeutic management of special diseases including prescription-writing. Prerequisite: *Materia Medica*, III, course 53. .6Mj. Summer and Spring, M., W., F., 8:00, PROFESSOR TIEKEN AND DR. GAY.

3. Practical Therapeutics.—A laboratory and practical course in massage, hydrotherapy, aerotherapy, electrotherapy, cooking for the sick, and the general management of the sick, with clinical application. Given to the class in sections. Tu., Th., 4:00-6:00. .4Mj. Autumn and Winter, ASSISTANT PROFESSOR OLDENBORG, DR. BROWER, AND ASSISTANTS.

II. SENIOR YEAR

5. Preventive Medicine, Hygiene and Sanitation.—A lecture and conference course in public health and sanitation, including a study of municipal water, milk, and food supply, housing, etc. .4Mj. Autumn, Tu., Th., 8:00, DR. GAY.

7. Kinesitherapy.—A practical course in Kinesitherapy, with demonstrations, including massage, Swedish movements, and Frenkel re-educative exercises, the students themselves having an opportunity to practice these forms of treatment on patients sent from the other departments of the dispensary. Hours to be announced. .6Mj. Autumn, Winter, and Spring, ASSISTANT PROFESSOR OLDENBORG AND MR. CARLSTROM.

VI. THE DEPARTMENT OF PATHOLOGY

(At the University, Department XXVIII)

OFFICERS OF INSTRUCTION

LUDVIG HEKTOEN, M.D., Sc.D., Professor and Head of the Department of Pathology.

HARRY GIDEON WELLS, A.M., Ph.D., M.D., Professor of Pathology.

EDWARD VAIL LAPHAM BROWN, M.D., Assistant Professor in the Pathology of the Eye.

HARRIET FAY HOLMES, A.B., Special Instructor in Pathological Technique.

EDWIN FREDERICK HIRSCH, A.M., Ph.D., Instructor in Pathology.

GEORGE THOMAS CALDWELL, A.B., A.M., Associate in Pathology.

OSCAR JACOB ELSESSER, S.B., Laboratory Assistant in Pathology.

HARRY LEE HUBER, S.B., Research Assistant in Pathology.

LYDIA M. DEWITT, A.M., M.D.,
Assistant Professor of Pathology

MAUD SLYE, A.B.

} Members of the Otho S. A. Sprague
} Memorial Institute.

FELLOW, 1915-16

EMANUEL BERNARD FINK, S.B.

AT RUSH MEDICAL COLLEGE

LUDWIG HEKTOEN, M.D., Sc.D., Professor and Head of the Department of Pathology.

EDWIN RAYMOND LECOUNT, M.D., Professor of Pathology.

GEORGE HOWITT WEAVER, M.D., Associate Professor of Pathology.

GEORGE FREDERICK DICK, M.D., Assistant Professor of Pathology.

ALBERT MONTAGUE MOODY, M.D., Instructor in Pathology.

HOMER KING NICOLL, A.B., M.D., Associate in Pathology and Resident Pathologist, Presbyterian Hospital.

FRANK RAYMOND MENNE, S.B., M.D., Assistant in Pathology.

KÆTHE WELLER DEWEY, M.D., Fellow in Pathology.

INTRODUCTORY

The courses offered by the Department include the required work in Pathology in the curriculum of the first two years in the study of Medicine, as well as advanced courses arranged for those desiring a more extended knowledge of the subject, and for those wishing to qualify themselves for research.

For each major or double-minor course requiring laboratory work the laboratory fee is \$5.00.

COURSES OF INSTRUCTION

I. SENIOR COLLEGE COURSES

1. General Pathology and Pathological Histology.—A practical laboratory course in general pathologic histology, supplemented by experiment, by the study of fresh and museum specimens, and by recitations in general pathology. Prerequisite: Histology, Physiology, Bacteriology, Physiological Chemistry, and Visceral Anatomy. Laboratory, recitations, and lectures: 9 hours a week. Mj. Autumn, DR. HIRSCH AND ASSISTANTS; Winter, PROFESSOR WELLS, MR. CALDWELL, AND ASSISTANTS.

2. Pathology of Infectious Granulomas and Tumors.—Mj. Spring, PROFESSOR WELLS, DR. HIRSCH, MR. CALDWELL, AND ASSISTANTS.

1 and 2 will be given as double-minor courses in the First and Second Terms of the Summer Quarter. Daily 8:00-11:00, DR. HIRSCH, MR. CALDWELL, AND ASSISTANTS.

5. Special Pathology.—Supplementary to and paralleling course 2. A study of the pathological changes affecting different organs and tissues. Limited to 30 students. Mj. Spring, DR. HIRSCH AND MR. CALDWELL.

II. GRADUATE COURSES

3. Advanced Pathology.—Open to a limited number of students who have credit in general pathology. Laboratory work will be given in pathological technique, the study and recording of autopsies, and special pathological material. Laboratory fee, \$5.00. Hours to be arranged for each student. Mj. each Quarter, PROFESSOR WELLS.

4. Research in Pathology.—Open to a limited number of qualified students and graduates in medicine. Laboratory fee, \$5.00 per Mj. Hours to be arranged for each student. Mj. or DMj. each Quarter, PROFESSORS HEKTOEN AND WELLS.

6. Pathology of the Eye.—Special pathology for practicing physicians and advanced students. Laboratory fee, \$5.00. Hours to be arranged. DM. Summer, First Term, ASSISTANT PROFESSOR BROWN.

8. Pathological Technique.—Open to a limited number of students. Mj. Autumn, MISS HOLMES.

III. JUNIOR AND SENIOR COURSES (WEST SIDE)

12. Special Pathologic Anatomy and Histology.—Limited to twenty-five students. Practical instruction is given in the methods of making post-mortem examinations and of recording the results. The student studies and describes the gross and microscopic appearance of diseased organs and tissue. Bacteriologic and chemical methods and experiments are employed whenever indicated and the clinical relations (pathologic physiology) of the morbid conditions

are emphasized. *Prerequisite: courses Pathology 1 and 2.* Daily 2:00-4:00, except Saturday, and autopsies two hours weekly. 144 hours. 1.2Mj. Summer, Autumn, Winter, and Spring, PROFESSOR LECOUNT AND ASSISTANT PROFESSOR DICK.

13. The Histology and Diagnosis of Tumors.—*Prerequisite: courses Pathology 1 and 2.* 8:00-10:00 A.M. 72 hours. Mj. Autumn, PROFESSOR LECOUNT.

17. Advanced Laboratory Work and Research in Pathology.—Open to a limited number of specially qualified students and graduates in medicine. Hours arranged for each student. Credit given based on time and quality of work. Throughout the year. PROFESSORS HEKTOEN AND LECOUNT AND ASSISTANTS.

XXVIII. THE DEPARTMENT OF HYGIENE AND BACTERIOLOGY

OFFICERS OF INSTRUCTION

EDWIN OAKES JORDAN, PH.D., Professor of Bacteriology and Chairman of the Department of Hygiene and Bacteriology.

NORMAN MACLEOD HARRIS, M.B., Assistant Professor of Bacteriology.

PAUL GUSTAV HEINEMANN, PH.D., Instructor in Bacteriology.

WILLIAM ERNEST CARY, S.B., Assistant in Bacteriology.

ERNEST EDWARD IRONS, M.D., PH.D., Assistant Professor of Medicine (Summer Quarter, 1915).

FELLOW, 1915-16

MILFORD EVERETT HINDS, S.M.

INTRODUCTORY

The courses offered by the Department include the required work in Bacteriology in the curriculum of the first two years in the study of Medicine, as well as advanced courses arranged for those desiring a more extended knowledge of public-health work, and for those wishing to qualify themselves for research.

For each major or double-minor course requiring laboratory work the laboratory fee is \$5.00.

COURSES OF INSTRUCTION

I. SENIOR COLLEGE COURSES

1. General Bacteriology.—For non-medical students. Mj. Autumn, Spring, and Summer, PROFESSOR JORDAN, DR. HEINEMANN, AND MR. CARY.

2. The Pathogenic Bacteria.—Primarily for medical students. 1½Mjs. Summer and Autumn, 1:30-4:30, ASSISTANT PROFESSOR HARRIS, DR. HEINEMANN, AND MR. CARY.

3. Public Hygiene.—The applications of Bacteriology to municipal hygiene, water supply, food supply, etc. ¼Mj. Autumn, PROFESSOR JORDAN.

4. Industrial Hygiene.—Occupational dangers and diseases. ½Mj. *Prerequisite: course 3.* Winter, DR. ———.

5. Public Health Problems.—Infant welfare, the anti-tuberculosis campaign, etc. ½Mj. Spring. *Prerequisite: course 3.* DRs. ———, ———, AND ———.

II. GRADUATE COURSES

10. Sanitary Aspects of Milk Supply.—Lectures and laboratory methods. Laboratory fee, \$5.00. Prerequisite: Chemistry and Bacteriology. Mj. DR. HEINEMANN.

11. Sanitary Water Analysis.—Chemical, bacterial, and microscopical methods. Lectures and laboratory work. Mj. Winter, PROFESSOR JORDAN.

12. Public Health Laboratory Methods.—Diagnosis of diphtheria, typhoid fever, glanders, and rabies; Wassermann test, etc. Prerequisite: Pathogenic Bacteria 21. Lectures and laboratory. Mj. Winter, ASSISTANT PROFESSOR HARRIS.

13. Parasitology.—Animal parasites of man (including protozoa). Lectures: M., W., 1:30–2:30. Laboratory: Tu., Th., and F., 1:30–3:30. Class is limited to 10. Mj. Spring. [Not given in 1916.]

14. Immunity in Relation to Preventive Medicine.—Mj. Summer, M., W., Th., F., 11:00. ASSISTANT PROFESSOR IRONS.

15. Advanced Bacteriology.—Open to a limited number of specially prepared students and to graduates in medicine. Laboratory fee, \$5.00. Repeated each Quarter. Hours to be arranged. Mj. PROFESSOR JORDAN AND ASSISTANT PROFESSOR HARRIS.

16. Vital Statistics and Epidemiology.—Prerequisite: course 2 or 3. $\frac{1}{2}$ Mj. Spring, PROFESSOR JORDAN.

20. Research in Bacteriology.—Laboratory fee, \$5.00. Mj. or DMj. each Quarter, PROFESSOR JORDAN.

VII. DEPARTMENT OF MEDICINE

OFFICERS OF INSTRUCTION

INTERNAL MEDICINE

FRANK BILLINGS, S.M., M.D., Professor and Head of the Department of Medicine.

NORMAN BRIDGE, A.M., M.D., Emeritus Professor of Medicine.

HENRY BAIRD FAVILL, M.D., Professor of Medicine.

JAMES BRYAN HERRICK, A.M., M.D., Professor of Medicine.

BERTRAM WELTON SIPPY, M.D., Professor of Medicine.

JOSEPH LEGGETT MILLER, M.D.; SAMUEL ROBERT SLAYMAKER, M.D.;

JOSEPH ALMARIN CAPPS, A.M., M.D.; BIRD MCPHERSON LINNELL, M.D., Associate Professors of Medicine.

LUDWIG MANHEIMER LOEB, M.D.; JOHN LAURENCE JACQUE, M.D.; JAMES MURRAY WASHBURN, M.D.; MOSES MILTON PORTIS, M.D.; ALEXANDER FRANCIS STEVENSON, M.D.; ROLLIN TURNER WOODYATT, M.D.; WILBER E. POST, M.D.; ERNEST EDWARD IRONS, M.D., Ph.D.; JOHN RITTER, M.D.; LEON BLOCH, M.D.; ELLIS KIRK KERR, M.D.; SIDNEY STRAUSS, M.D.; KARL K. KOESSLER, M.D.; EDWARD CARL ROSENOW, M.D.; CHRISTIAN DENCKER, M.D.; WALTER WILE HAMBURGER, M.D., Assistant Professors of Medicine.

RALPH WALDO WEBSTER, M.D., Ph.D.; ARTHUR A. SMALL, M.D.; ARCHIBALD HOYNE; RALPH C. BROWN, M.D.; WILLARD WOODARD DICKER, M.D.; JAMES RICHARD GREER, M.D.; JOHN HANCOCK McCLELLAN, M.D., Instructors in Medicine.

WILLIAM H. WALKER, M.D.; ROBERT STANTON MCCAUGHEY, M.D.; FREDERICK OLAF FREDERICKSON, M.D.; GEORGE HALPERIN, M.D.; HENRY WILLIAM ABELMAN, M.D.; JOHN J. ALDERSON, M.D.; ISADORE M. TRACE, M.D.; DONALD P. ABBOTT, M.D.; HARRY G. HARDT, M.D.; RUSSELL M. WILDER, M.D., Associates in Medicine.

SIGISMUND FRANKLIN WATERMAN, M.D.; MAURICE BUCHSBAUM, M.D.; CHARLES A. GRIFFITH, M.D.; LELAND E. PHIPPS, M.D.; WILLIAM H. GLAFFKE, M.D.; BURTON T. GORDON, M.D.; HENRY J. ULLMAN, M.D.; ROBERT S. BERGHOFF, M.D.; GEORGE HOWELL COLEMAN, M.D.; LEE CONNELL GATEWOOD, M.D.; MAX BENJAMIN LEVITON, M.D.; CLAUDE ALLEN LINK, M.D.; BEVERIDGE HARSHAW MOORE, M.D.; ABRAHAM RIMMERMAN, M.D.; JOHN D. ELLIS, Assistants in Medicine.

FREDERICK WILLIAM GAARDE, M.D., *Dane Billings* Fellow in Medicine.

PEDIATRICS

JOHN MILTON DODSON, A.M., M.D., Professor of Medicine (Pediatrics).

ALFRED CLEVELAND COTTON, A.M., M.D., Professor of Medicine (Pediatrics).

FRANK SPOONER CHURCHILL, M.D., Associate Professor of Medicine (Pediatrics).

SAMUEL AMBERG, M.D., Associate Professor of Experimental Medicine.

JAMES WARREN VANDERSLICE, M.D.; SAMUEL JOHNSON WALKER, M.D.;

HENRY F. HELMHOLZ, M.D.; FRANK WESLEY ALLIN, M.D.; CLIFFORD G.

GRULEE, A.M., M.D., Assistant Professors of Medicine (Pediatrics).

JAMES PATTERSON, M.D., GUSTAV LEONARD KAUFFMAN, M.D.; Instructors in Medicine (Pediatrics).

GRACE HARRIET CAMPBELL, M.D.; AUGUST STRAUCH, M.D., Associates in Medicine (Pediatrics).

GEORGE EDWIN BAXTER, M.D.; PHILIP S. CHANCELLOR, M.D.; CHARLES

SCHOTT, M.D.; HENRY H. KLEINPELL, M.D.; LORIN C. COLLINS, M.D.;

SIGURD KRAFT, M.D.; LOUIS W. SAUER, M.D.; WILLIAM B. McCLURE,

M.D.; WALTER H. O. HOFFMAN, M.D.; FRANK AMOS CHAPMAN, M.D.;

CECIL THEODORE HEIDEL, M.D.; GARAHED A. Z. GARABEDIAN, M.D.;

LORETTA MAHER, M.D.; WALTER FRITZ WINHOLT, M.D.; ABRAHAM

BERNARD SCHWARZ, M.D., Assistants in Medicine (Pediatrics).

NERVOUS AND MENTAL DISEASES

THOR ROTHSTEIN, M.D., Professor of Medicine (Nervous and Mental Diseases).

SIDNEY KUH, M.D.; JAMES CORNELIUS GILL, M.D.; GEORGE WASHINGTON

HALL, A.M., M.D.; PETER BASSOE, M.D., Associate Professors of Medicine

(Nervous and Mental Diseases).

JOSEPHINE ESTABROOK YOUNG, M.D., Assistant Professor of Medicine (Nervous and Mental Diseases).

SIGMUND KRUMHOLZ, M.D., Instructor in Medicine (Nervous and Mental Diseases).

MAURICE BRAUDE, M.D.; WILLIAM FREDERICK DEY, M.D.; CLARA HARRISON

TOWNE, PH.D., Associates in Medicine (Nervous and Mental Diseases).

EDWIN T. SECOR, M.D.; SAMUEL NYE CLARK, M.D., Assistants in Medicine

(Nervous and Mental Diseases).

INTRODUCTORY

In this Department instruction is given in the topics usually comprised under the terms Internal Medicine, Pediatrics, and Neurology. The abundant clinical material in the Central Free Dispensary, the Presbyterian, the Children's Memorial, Cook County, and other hospitals, makes it possible to give instruction largely by object-lessons—the actual study of disease in the living patient by students arranged in small groups. The courses comprise (A) a series of clinics to small groups of students in the Cook County Hospital, (B) arena clinics at Rush Medical College, (C) courses in physical and laboratory diagnosis, (D) a protracted course in the Central Free Dispensary, (E) a clinical clerkship in the wards of the Presbyterian Hospital for one quarter, and (F) other lecture, conference, and clinical courses in the several topics. Each student should so elect his work in this Department as to secure a comprehensive knowledge of the whole field of general medicine, including Neurology and Pediatrics.

There are required for graduation courses 0, 2, 5, and 6A, and in addition thereto at least .8 major in Internal Medicine, .4 major in Pediatrics, and .4 major in Nervous and Mental Diseases.

COURSES OF INSTRUCTION

INTERNAL MEDICINE

I. JUNIOR YEAR

0. Practice of Medicine.—A conference and recitation course on the essentials of the practice of medicine, designed to afford a general survey of the more important diseases and conditions in preparation for the clinical courses. Limited to 30 students in each section. 36 hours. M., W., F., 8:00. .6Mj. Autumn, ASSOCIATE PROFESSOR SLAYMAKER, ASSISTANT PROFESSORS WASHBURN AND IRONS, AND DR. BROWN.

2. Physical Examination.—A conference and practical course on the methods of physical exploration, chiefly of the normal body. Tu., Th., Sat., 8:00. 60 hours. .3Mj. Autumn, PROFESSOR TIEKEN, ASSOCIATE PROFESSOR GILL, ASSISTANT PROFESSORS STEVENSON, RITTER, AND DENCKER, AND DRs. DICKER, GREER, GAARDE, HALPERIN, AND MARY JOHNSTONE.

3. Clinic and Conference at the Cook County Hospital.—Topics: Autumn: Infectious Diseases; Winter: Constitutional Diseases and Diseases of the Kidney and Ductless Glands; Spring: Diseases of the Alimentary Tract. Limited to 10 students. Th., 9:00–11:00; M., 9:00. 36 hours. .4Mj. ASSOCIATE PROFESSOR SLAYMAKER.

3A. Clinic and Conference Course at the Cook County Hospital.—Topics: Autumn: Constitutional Diseases and Diseases of the Kidney and Ductless Glands; Winter: Diseases of the Alimentary Tract and Liver; Spring: Diseases of the Heart and Blood Vessels. Limited to 10 students. W., 2:00–4:00; M., 3:00–4:00. 36 hours. .4Mj. ASSOCIATE PROFESSOR MILLER.

3B. Clinic and Conference Course at the Cook County Hospital.—Topics: Autumn: Infectious Diseases and Diseases of the Blood; Winter: Diseases of the Heart and Blood Vessels; Spring: Constitutional Diseases and Diseases of the Kidney and Ductless Glands. Limited to 10 students. Tu., 2:00–4:00; Th., 3:00–4:00. 36 hours. .4Mj. ASSOCIATE PROFESSOR CAPPs.

3C. Clinic and Conference Course at the Cook County Hospital.—Topics: Autumn: Diseases of the Alimentary Tract and Liver; Spring: Respiratory Diseases. Limited to 10 students. M., 9:00–11:00; Th., 9:00. 36 hours. .4Mj. PROFESSOR TIEKEN.

3E. Clinic and Conference Course at the Cook County Hospital.—Topics: Autumn: Diseases of the Heart and Blood Vessels; Winter: Infectious Diseases and Diseases of the Blood; Spring: Diseases of the Alimentary Tract and Liver. Limited to 10 students. Tu., 9:00–11:00; F., 9:00. 36 hours. .4Mj. ASSISTANT PROFESSOR PORTIS.

3F. Clinic and Conference Course at the Cook County Hospital.—Topics: Summer: Constitutional Diseases and Diseases of the Blood and Ductless Glands; Winter: Respiratory Diseases; Spring: Infectious Diseases and Diseases of the Blood. Limited to 10 students. Tu., 11:00; F., 11:00–1:00; 36 hours. .4Mj. ASSISTANT PROFESSOR LOEB.

3G. Clinic and Conference Course at the Cook County Hospital.—Topics: Autumn: Diseases of the Alimentary Tract and Liver; Spring: Infectious Diseases and Diseases of the Blood. Limited to 10 students. Tu., 9:00–11:00; F., 9:00. 36 hours. .4Mj. ASSISTANT PROFESSOR IRONS.

3H. Clinic and Conference Course at the Cook County Hospital.—Topics: Summer: Diseases of the Alimentary Tract and Liver; Autumn: Respiratory Diseases; Winter: Infectious Diseases and Diseases of the Blood; Spring: Diseases of the Heart and Blood Vessels. Limited to 10 students. Sat., 9:00; W., 9:00–11:00. 36 hours. .4Mj. ASSISTANT PROFESSOR BLOCH.

3J. Clinic and Conference Course at the Cook County Hospital.—Topics: Diseases of the Heart and Blood Vessels; Autumn: Diseases of the Heart and Blood Vessels; Winter: Respiratory Diseases. Limited to 10 students. F., 2:00–4:00; Tu., 2:00. 36 hours. .4 Mj. ASSISTANT PROFESSOR KERR.

3K. Clinic and Conference Course at the Cook County Hospital.—Topics: Autumn: Constitutional Diseases, Diseases of the Ductless Glands and Kidney; Winter and Spring: Diseases of the Heart and Blood Vessels. M., Th., 2:00–4:00. 36 hours. .4Mj. ASSISTANT PROFESSOR POST.

3L. Clinic and Conference Course at the Cook County Hospital.—Autumn and Winter: Infectious Diseases and Diseases of the Blood; Spring: Respiratory Diseases. W., Sat., 11:00–1:00. 36 hours. .4Mj. ASSISTANT PROFESSOR HAMBURGER.

3M. Clinic and Conference Course at the Cook County Hospital.—Topics: Autumn: Diseases of the Alimentary Tract and Liver, with special reference to the use of the X-ray in the diagnosis of these conditions; Spring: Constitutional Diseases and Diseases of the Blood and Ductless Glands. Tu., F., 2:00–4:00. 48 hours. .4Mj. DR. ROGER T. VAUGHAN.

3X. Clinic and Conference Course at the Central Free Dispensary.—Topic: Diagnostic Methods. Autumn, Winter, and Spring. M., Th., 9:00–11:00. 48 hours. .4Mj. ASSISTANT PROFESSOR DENCKER.

4. Conference Course on the Diseases Less Commonly Seen in the Clinics, including the Contagious Diseases.—Summer and Spring. M., W., F., 8:00. 36 hours. .6Mj. ASSISTANT PROFESSORS STEVENSON AND DENCKER.

5. Laboratory Diagnosis.—A laboratory course in the chemical, microscopic, and bacteriologic examination of blood, urine, sputum, gastric contents, feces, secretions, exudates, etc., and their pathologic and clinical significance, especial attention being given to the acquisition of an accurate technique. Each class limited to 36 students. Autumn, each Term: sec. *a*, M., W., Th.; sec. *b*, Tu., Fri., Sat., 9:00–11:00. 36 hours. .3Mj. ASSISTANT PROFESSOR HAMBURGER AND DRs. DICKER, WALKER, NICOLL, GAARDE, AND COLEMAN.

II. JUNIOR AND SENIOR YEARS

6. A Clinical Course.—In the Central Free Dispensary each quarter. In the departments of Internal Medicine, of Pediatrics, and of Nervous and Mental Diseases, conducted by members of the Department. Prerequisite: Physical and Laboratory Diagnosis. In sections, one quarter for each section. Daily, 9:00–11:00. 144 hours. 1.2Mjs.

III. SENIOR YEAR

***6A. Clinical Course in the Presbyterian Hospital.**—Thirty Senior students will be assigned each quarter to the medical services in the Presbyterian Hospital, and to the service in Diseases of Children and the Anna W. Durand Hospital for Contagious Diseases, for a period of one quarter, to serve daily as clinical clerks and laboratory assistants. Each student so assigned will serve in the clinical laboratory of the hospital and in the wards from 8:00–10:00 daily. Approximately 140 hours. 1.2 Mj.

8. Clinical Medicine.—A clinical and conference course in general medicine with special reference to methods of diagnosis. M., Th., 10:00–11:00. 24 hours. .2Mj. Summer, DRs. WILDER AND ABBOTT.

9. Clinical Medicine.—Clinical and conference course in Infectious Diseases and Diseases of the Respiratory Tract with special reference to Applied Therapeutics. M., Th., 10:00–11:00. 24 hours. Prerequisite: courses Materia Medica 53 and 53A. .2Mj. Autumn, PROFESSOR BILLINGS.

9A. Clinical Medicine.—A clinical and conference course in Infectious Diseases and Diseases of the Respiratory Tract with special reference to Applied Therapeutics. M., Th., 10:00–11:00. 24 hours. .2Mj. Winter, PROFESSOR TIEKEN.

10. Clinical Medicine.—A clinical and conference course in Diseases of the Blood and Ductless Glands. M., Th., 10:00–11:00. 24 hours. .2Mj. Spring, ASSISTANT PROFESSOR WASHBURN.

11. Clinical Medicine.—A clinical and conference course in medicine. Summer: Infectious Diseases and Immunity. ASSISTANT PROFESSOR IRONS AND DR. GREER.

11. Autumn: Diseases of the Heart, Kidney, and Blood Vessels. PROFESSOR HERRICK.

11. Winter: Diseases of the Heart, Kidney, and Blood Vessels. PROFESSOR HERRICK.

11. Spring: Diseases of Metabolism and the Metabolic Aspects of Disease. Tu., F., 10:00–11:00. Each course 24 hours. .2Mj. ASSISTANT PROFESSOR WOODYATT.

13. Clinical Medicine.—A clinical and conference course in medicine. Summer: Tuberculosis in its various aspects, pulmonary, glandular, abdominal, etc., and covering diagnosis, therapy, hygienic principles, and sociology. ASSISTANT PROFESSOR RITTER, DRs. HALPERIN, DICKER, AND HARDT.

13. Autumn: Diseases of the Alimentary Tract and Ductless Glands. PROFESSOR SIPPY.

13. Winter: Diseases of the Alimentary Tract and Ductless Glands. PROFESSOR SIPPY.

13. Spring: Diseases of the Alimentary Tract, with special reference to Parasitology. W., Sat., 10:00–11:00. Each course 24 hours. .2Mj. DR. RALPH BROWN.

23. Therapeutic Clinic.—A medical clinic at the Cook County Hospital with special reference to Therapeutics. Prerequisite: course III, 53. Each Quarter, W., 7:00–9:00 P.M. 24 hours. .2Mj. PROFESSOR TIEKEN.

25. Diseases of the Stomach.—A clinical and laboratory course, limited to twelve students. About three-fourths of the course will be devoted to the practical examination of patients in the Central Free Dispensary, and the remainder to laboratory investigation. Hours to be announced. .4Mj. Autumn, Winter, and Spring, ASSISTANT PROFESSOR PORTIS.

28. Medical Tuberculosis.—A clinical and conference course in the medical, and especially in the sociologic measures, for the prophylactic and curative treatment of tuberculosis. Students taking this course will assist the physician in charge of the Rush Medical College station of the Municipal Tuberculosis

* Each student is required to purchase or rent for this course a microscope, and to purchase a hemocytometer and a Talquist scale or a hemoglobinometer.

Sanitarium, and will also visit with him, or the visiting nurse, the homes of the tubercular patients. Limited to 2 students. W., Sat., 9:00-11:00. .4 to .6Mj. ASSISTANT PROFESSOR RITTER AND ASSISTANTS.

28A. Tuberculosis.—A clinical and conference course for practitioners, extending from September 6 to 29, 1915. ASSISTANT PROFESSOR RITTER AND OTHERS. Detailed information furnished on application.

29. Diseases of Occupation.—A clinical and conference course in the causation, manifestations, and prophylaxis of diseases due to the mal-hygiene of working conditions in the various trades and callings. Besides the study of dispensary and hospital cases, opportunity for field experience is offered with physician in charge. Limited to 4 students. Each Quarter, Tu., F., 9:00-11:00. .4Mj. ASSOCIATE PROFESSOR BASSOE, DR. JOHN D. ELLIS, AND DR. ALICE HAMILTON.

33. Variola (Extra-mural).—A clinical course in variola, at the Chicago Isolation Hospital, at intervals as material is afforded. Classes limited to 10 each. .2M. ASSOCIATE CLINICAL PROFESSOR HEMAN SPALDING OR DR. HAYNE.

34. A Course in Clinical Medicine (Extra-mural).—At St. Luke's Hospital. Limited to small groups. W., 4:00-6:00. 24 hours. .2Mj. Winter, PROFESSOR HENRY B. FAVILL.

36. Clinical Diagnosis Course.—A course in clinical instruction, including all necessary chemical, microscopic, and bacteriologic examinations of blood, urine, sputum, gastric contents, feces, etc. Limited to 6 students. W., 9:00-11:00. 24 hours. .3Mj. Summer and Spring, ASSOCIATE PROFESSOR LINNELL.

37. Diseases of Metabolism.—A conference course on the diseases of metabolism with special reference to their physiological chemistry. Tu., F., 9:00-11:00. 48 hours. .4Mj. Autumn and Spring, DR. WEBSTER.

38. Clinical Course at the Cook County Hospital.—A course in the clinical investigation of selected topics in the physiology and pathology of the stomach, duodenum, liver, and pancreas; clinical and laboratory study of selected cases from the wards with the aid of the newer methods of examination. Limited to 6 students. W., Sat., 11:00-1:00. 48 hours. .4 Mj. Summer, DR. WALTER HAMBURGER.

PEDIATRICS

1. The Principles of Pediatrics.—A conference and practical course comprising the anatomy, physiology, and hygiene of infancy and childhood, and the dietetics of infancy. Prerequisite to every other course in pediatrics. 24 hours. .3Mj. Summer, Tu., F., 8:00, DR. PATTERSON; Autumn, Tu., F., DR. STRAUCH; Spring, M., Th., 8:00, ASSISTANT PROFESSOR ALLIN.

6. Dispensary Clinic.—See p. 64; one-fourth of the time allotted to this course is devoted to pediatrics.

7. Pediatric Clinic.—A clinical course in Senn Hall. Topics: Winter: The Diseases of the Respiratory Tract in Infancy and Childhood; Summer: The Diseases of Alimentation. Prerequisite: course 1. Limited to 10 students. W., Sat., 9:00-11:00. 48 hours. .4Mj. ASSISTANT PROFESSOR VANDERSLICE.

12. Pediatric Clinic.—A clinical course in the Presbyterian Hospital and in Senn Hall. Topics: Autumn: The Diseases of the Newly Born; Winter: The Diseases of the Nervous System in Infancy and Childhood; Spring: The Diseases of the Alimentary Tract. Prerequisite: course 1. Limited to 10 students. Tu., F., 9:00-11:00. 48 hours. .4Mj. PROFESSOR DODSON AND DR. PATTERSON AND STRAUCH.

15. Pediatric Clinic.—A course in physical diagnosis and the demonstration of cases at the Children's Memorial Hospital. Topics: Autumn: The Methods of Examination of the Child and Demonstration of Clinical Cases; Spring: Infant Feeding: Clinical Demonstration and Practical Work in the Preparation of Infant Foods. Prerequisite: course 1. Limited to 8 students. M., Th., 2:00-4:00. .4Mj. ASSISTANT PROFESSOR HELMHOLZ.

17. Pediatrics.—A bedside course at the Children's Memorial Hospital. Topics: Autumn: Infant Feeding; Winter and Spring: Infectious Diseases. Prerequisite: course 1. Limited to 8 students. W., 2:00-4:00. 24 hours. Students registering for this course should also register for course VIII, 27. .2Mj. ASSOCIATE PROFESSOR CHURCHILL.

18. Pediatric Clinic.—A clinic and conference course at the Cook County and Presbyterian hospitals. Topics: Autumn: The Dietetics of Infancy; Spring: The Commoner Diseases of Infancy, including rickets, scurvy, congenital syphilis, tuberculosis, etc. Prerequisite: course I. Limited to 10 students. M., Th., 8:00-10:00. .4Mj. ASSISTANT PROFESSOR GRULEE.

18A. Pediatric Clinic at the Cook County Hospital.—A clinic and conference course at the Cook County Hospital. Limited to 10 students. Each Quarter, F., 7:00-9:00. 24 hours. .2Mj. ASSISTANT PROFESSOR GRULEE AND DR. STRAUCH.

20. Pediatric Clinic at the Cook County Hospital.—A clinical course in the diseases of children, with especial reference to tuberculosis. Limited to 10 students. M., Th., 4:00-6:00. .4Mj. Autumn, DR. MAY MICHAEL.

24. Pediatric Clinic.—A clinical course at the Children's Memorial Hospital. Limited to 8 students. Tu., 2:00-4:00. 24 hours. Students taking this course should also register for course VIII, 28. .2Mj. Autumn, Winter, and Spring. ASSISTANT PROFESSOR WALKER.

FOR PRACTITIONERS

Clinical Courses at the Children's Memorial Hospital.—Courses are offered, for practitioners only, at the Children's Memorial Hospital. For the present these courses are arranged as follows: (1) Ward Work in Pediatrics; (2) Pathological Laboratory; (3) Diseases of the Throat, Nose, and Ear, in Children; (4) Surgical Orthopedic and Ophthalmic Clinics. Detailed description of these courses will be furnished on application to Rush Medical College. First Term, Autumn, Winter, and Spring. Tuition for each course, \$20.00, any three courses, \$40.00. By the members of Medical Staff of the Children's Memorial Hospital. [See p. 83.]

NERVOUS AND MENTAL DISEASES

3D. Diseases of the Nervous System.—A clinical and conference course at the Cook County Hospital. Limited to 10 students. M., Th., 9:00-11:00. 48 hours. .4Mj. Spring, ASSOCIATE PROFESSOR HALL.

19. Psychology as Related to Psychiatry.—A lecture, demonstration, and conference course in psychology as an introduction to clinical psychiatry. Tu., Th., 8:00-9:00. 24 hours. .4Mj. Winter, ASSOCIATE PROFESSOR KUH.

19A. Pathology of the Nervous System.—A demonstration, clinical, and conference course, including discussion of symptoms depending upon various pathologic changes in the nervous system. Prerequisite: one clinical course in Nervous Diseases. Tu., Th., 8:00. 24 hours. .4Mj. Spring, PROFESSOR ROTHSTEIN.

21. Diseases of the Nervous System.—A clinical course in the amphitheater of Senn Hall, and at the Cook County Hospital. 48 hours. M., Th., 9:00-11:00. .4Mj. Summer, ASSOCIATE PROFESSORS BASSOE AND HALL.

21F. Diseases of the Nervous System.—Similar to course 21. .4Mj. Autumn, ASSOCIATE PROFESSORS HALL AND BASSOE.

21S. Diseases of the Nervous System.—Similar to course 21. .4Mj. Spring, ASSOCIATE PROFESSOR GILL.

21W. Diseases of the Nervous System.—Similar to course 21. .4Mj. Winter, PROFESSOR ROTHSTEIN.

22. Psychiatry.—A clinical and conference course at the Cook County Hospital. Topic: Insanity. Conference: M., 4:00-6:00, Rush Medical College; Clinic: Th., 5:00, Cook County Hospital. 36 hours. .4Mj. Autumn and Spring, ASSOCIATE PROFESSOR KUH.

VIII. DEPARTMENT OF SURGERY

OFFICERS OF INSTRUCTION

ARTHUR DEAN BEVAN, M.D., *Nicholas Senn* Professor and Head of the Department of Surgery.

DAVID WILSON GRAHAM, A.M., M.D., Clinical Professor of Surgery.

WILLIAM THOMAS BELFIELD, M.D., Professor of Surgery (Genito-urinary).

DEAN DEWITT LEWIS, S.B., M.D., Associate Professor of Surgery.

CHARLES AUBREY PARKER, M.D.; CARL BRADEN DAVIS, M.D., Assistant Professors of Surgery.

EDWIN WARNER RYERSON, M.D., Assistant Professor of Surgery (Orthopedic).

FREDERIC BROWN MOOREHEAD, M.D., D.D.S., Assistant Professor of Surgery (Oral and Dental).

DALLAS BALDWIN PHEMISTER, M.D.; PAUL OLIVER, M.D.; GEORGE GILBERT DAVIS, M.D.; EVARTS AMBROSE GRAHAM, M.D.; VERNON CYRENIUS DAVID, M.D.; EDWARD JAMES LEWIS, M.D.; ROGER T. VAUGHAN, M.D., Instructors in Surgery.

ISABELLA HERB, M.D., Instructor in Surgery (Anaesthetics).

ROBERT HARRY HERBST, M.D.; HERMAN LOUIS KRETSCHMER, M.D.; BUDD CLARKE CORBUS, M.D., Instructors in Surgery (Genito-urinary).

JOHN ALFRED GRAHAM, M.D.; DAVID C. STRAUSS, M.D.; FLOYD BURKE RILEY, M.D.; WALTER H. MEENTS, M.D.; ALBERT H. MONTGOMERY, M.D.; FRANKLIN B. MCCARTHY, M.D.; LOUIS D. SMITH, M.D., Assistants in Surgery.

THOMAS P. LYNAM, M.D.; ROBERT O. RITTER, M.D.; RICHARD B. OLSON, M.D.; NATHANIEL C. NELSON, M.D.; WILLIAM W. HOYT, M.D., Assistants in Surgery (Orthopedic).

HUGH JAMES POLKEY, M.D.; THEODORE DROSDOWITZ, M.D.; JOSEPH G. BERKOWITZ, M.D.; ROBERT E. RANSMEIER, M.D.; ST. CLAIR VANCE, M.D., Assistants in Surgery (Genito-urinary).

JOSEPH W. ROWNTREE, M.D., Lecturer in Radiology.

BENJAMIN FRANKLIN DAVIS, M.D., Ph.D., *Nicholas Senn* Fellow in Surgery.

GATEWOOD, M.D., *A. D. Thompson-Bevan* Fellow in Surgery.

JOHN RICH McDILL, M.D., Lecturer on Surgery (Tropical Diseases).

WALLACE BLANCHARD, M.D., Assistant Clinical Professor of Surgery (Orthopedic), Home for Destitute Crippled Children.

COLEMAN GRAVES BUFORD, M.D., Assistant Clinical Professor of Surgery, Children's Memorial Hospital.

INTRODUCTORY

A total of 5½ majors in surgery is required. The following subjects are prerequisite to other courses and to final examination: Surgical Anatomy, .8; Surgical Pathology and General Surgery, 1; Clinic and Conference Courses, including one course on each of the divisions of Regional Surgery: (a) Head, Neck, and Thorax; (b) Abdomen; (c) Extremities, 1.2; Genito-urinary, .4; Orthopedic, .4; Surgical Dispensary, .4; Operative Surgery on Cadaver and Animals, .3; Presbyterian Hospital Ward Work .4; Cook County Hospital Section Clinics, .4. An optional major, elected as the student desires and devoted either to laboratory or to clinical work, is recommended.

COURSES OF INSTRUCTION

I. JUNIOR YEAR

1. Principles of Surgery and Surgical Pathology.—A conference and laboratory course. M., W., F., 4:00. 36 hours. .5Mj. Autumn, ASSISTANT PROFESSOR DAVIS AND DRs. GRAHAM, LEWIS, DAVID, PHEMISTER, OLIVER, AND MEENTS.

2. Principles of Surgery and Surgical Pathology.—A conference and laboratory course. M., W., F., 4:00. 36 hours. .5Mj. Winter, ASSISTANT PROFESSOR DAVIS AND DRs. GRAHAM, LEWIS, DAVID, PHEMISTER, OLIVER, AND MEENTS.

3. Surgical Anatomy.—A demonstration and conference course, with dissections of the abdomen and lower extremity. M., Th., 12:00–1:00. 24 hours. .4Mj. Autumn, ASSOCIATE PROFESSOR LEWIS AND ASSISTANT PROFESSOR PARKER.

4. Surgical Anatomy.—A demonstration and conference course, with dissections of head, neck, thorax, and upper extremity. Tu., F., 12:00–1:00. 24 hours. .4Mj. Winter, ASSOCIATE PROFESSOR LEWIS AND ASSISTANT PROFESSOR PARKER.

5. Clinical Surgery (Central Free Dispensary).—Including bandaging, surgical dressings, and surgical appliances. Daily, 11:00–1:00. 48 hours. .4Mj. Each Quarter throughout the year. Sec. a: M., Th.; sec. b: Tu., F.; sec. c: W., Sat. Each section limited to 10 students. PROFESSOR BEVAN, ASSOCIATE PROFESSOR LEWIS, ASSISTANT PROFESSOR CARL DAVIS, AND DRs. OLIVER, GEORGE DAVIS, GRAHAM, PHEMISTER, STRAUSS, B. F. DAVIS, MEENTS, MONTGOMERY, MCCARTHY, GATEWOOD, AND VAUGHAN.

This course may be elected by Junior students after one quarter's residence in the clinical years during which other courses in surgery have been taken.

II. JUNIOR AND SENIOR YEARS

6. Clinical Surgery.—A clinical and conference course in general surgery, with special reference to and examination in the surgery of the head, neck, and thorax. This course includes instruction in the administration of anaesthetics. 11:00–1:00, M. and Th., Tu. and F., 48, 60, or 96 hours. .4, .6, or .8Mj. Autumn, PROFESSOR BEVAN, ASSOCIATE PROFESSOR LEWIS, ASSISTANT PROFESSOR DAVIS, AND DRs. G. G. DAVIS, PHEMISTER, EVARTS GRAHAM, AND B. F. DAVIS.

8. Clinical Surgery.—A clinical and conference course in general surgery, with special reference to and examination in the surgery of the abdomen. This course includes instruction in the administration of anaesthetics. M. and Th., Tu. and F., 11:00–1:00. 48, 60, or 96 hours. .4, .6, or .8Mj. Winter, PROFESSOR BEVAN, ASSOCIATE PROFESSOR LEWIS, AND ASSISTANT PROFESSOR DAVIS, AND DRs. G. G. DAVIS, PHEMISTER, EVARTS GRAHAM, AND B. F. DAVIS.

10. Clinical Surgery.—A clinical and conference course in general surgery, with special reference to and examination in surgery of the extremities. This course includes instruction in the administration of anaesthetics. M., Tu., Th., and F., 11:00–1:00. 48, 60, or 96 hours. .4, .6, or .8Mj. Spring, PROFESSOR BEVAN, ASSOCIATE PROFESSOR LEWIS, ASSISTANT PROFESSOR DAVIS, AND DRs. G. G. DAVIS, PHEMISTER, EVARTS GRAHAM, AND B. F. DAVIS.

12. Clinical Surgery.—A clinical and conference course in general surgery. This course includes instruction in the administration of anaesthetics. M., Tu., Th., and F., 11:00–1:00. 48, 60, or 96 hours. .4, .6, or .8Mj. Summer, PROFESSOR BEVAN, ASSOCIATE PROFESSOR LEWIS, AND ASSISTANT PROFESSOR DAVIS, AND DRs. G. G. DAVIS, PHEMISTER, EVARTS GRAHAM, AND B. F. DAVIS.

Laboratory and research work in surgical pathology may be elected by a limited number of students in the laboratories of Professor Bevan, and credit in proportion to the character and length of course may be granted, but not to exceed in any one quarter .4Mj.

12A. Clinical Course in the Presbyterian Hospital.—Thirty students will be assigned to the clinical services in the hospital to serve for one quarter to give anaesthetics and act as clinical assistants. Hours to be assigned.

14A. Orthopedic Surgery.—A clinical course at the Home for Destitute Crippled Children. M., Th., 2:00–4:00. 48 hours. 4Mj. Autumn, Winter, and Spring, ASSISTANT PROFESSOR RYERSON AND DR. LYNAM.

14B. Orthopedic Surgery.—A clinical course at the Home for Destitute Crippled Children. Tu., F., 2:00–4:00. 48 hours. 4Mj. Autumn, Winter, and Spring, ASSISTANT PROFESSORS PARKER AND BLANCHARD.

14C. Orthopedic Surgery.—A clinical course at the Home for Destitute Crippled Children. W., Sat., 2:00–4:00. 48 hours. 4Mj. Autumn, Winter, and Spring, DRs. PORTER, JACOBS, AND MAGNUSON.

16. A Practical Course in Operative Surgery on the Cadaver and on Animals.—Given to the class in sections. Limited to 24 students. M., W., F., 4:00–6:00. 36 hours. 3Mj. Repeated each Term of the Autumn and Winter Quarters and the First Term of the Spring Quarter. DRs. GEORGE G. DAVIS, D. B. PHEMISTER, AND BENJAMIN F. DAVIS.

17. Genito-urinary Diseases. (Central Free Dispensary.)—A clinical and conference course in diseases of the genito-urinary tract. Sec. a: M., Th.; sec. b: Tu., F.; sec. c: W., Sat., 4:00–6:00. 48 hours. 4Mj. Summer, Autumn, Winter, and Spring, PROFESSOR BELFIELD AND DRs. HERBST, KRETSCHMER, CORBUS, POLKEY, DROSDOWITZ, BERKOWITZ, RANSMEIER, AND VANCE.

18. Clinical Course at the Cook County Hospital.—Class limited to 8 students. Tu., 11:00–1:00. 24 hours. 2Mj. Each Quarter, DR. OLIVER.

20. Clinical Course at the Cook County Hospital.—Class limited to 8 students. F., 11:00–1:00. 24 hours. 2Mj. ASSISTANT PROFESSOR KEYES.

22. Clinical Course at the Cook County Hospital.—Class limited to 8 students. Tu., 7:00–9:00. 24 hours. 2Mj. Autumn, Winter, and Spring, ASSISTANT PROFESSOR KEYES.

24. Clinical Course at the Cook County Hospital.—Class limited to 10 students. W., 7:00–9:00 P.M. 24 hours. 2Mj. Autumn, Winter, and Spring, DR. OLIVER.

27. Orthopedic Clinic.—A clinic at the Children's Memorial Hospital. Limited to 8 students. W., 4:00–6:00. 24 hours. 2Mj. Autumn, Winter, and Spring, ASSISTANT PROFESSOR RYERSON.

28. Surgical Clinic.—A clinic at the Children's Memorial Hospital. Limited to 8 students. Tu., 4:00–6:00. 24 hours. 2Mj. Autumn, Winter, and Spring, ASSISTANT PROFESSOR BUFORD.

30. Anaesthetics.—A conference and demonstration course on the administration of anaesthetics. Sat., 2:00. 1Mj. Autumn, First Term, DR. ISABELLA HERB.

31. Surgical Physiology.—A conference and demonstration course on the application of physiological principles and methods to surgery. Sat., 2:00. 1Mj. Autumn, Second Term, DR. EVARTS GRAHAM.

32. Tropical Surgery.—A lecture and conference course on the diseases peculiar to the tropics, with special reference to their surgical treatment. Sat., 2:00. 1Mj. Winter, First Term, DR. McDILL.

33. Roentgenology.—A conference and demonstration course on the use of the X-ray in surgery. Sat., 2:00. 1Mj. Winter, Second Term, DR. ROWNTREE.

34. Oral and Dental Surgery.—A conference and clinical course of the surgery of the mouth and teeth. Sat., 2:00. 2Mj. Spring, ASSISTANT PROFESSOR MOOREHEAD.

III. POSTGRADUATE

29. Operative Surgery for Postgraduates.—On dogs, surgery of gastro-intestinal tract taking up gastrostomy, gastro-enterostomy, end to end intestinal anastomosis, lateral anastomosis, colostomy, Murphy button and anastomosis, gall-bladder drainage, etc. On the cadaver, amputations, ligations, drainage of joints, emergency and cranial operations. Four weeks, beginning July 1 and August 1. M., W., F., 4:00–6:00. Other days or months by special arrangement. Four or 8 men. Fee, \$25.00. DRs. GEORGE G. DAVIS, D. B. PHEMISTER, AND BENJAMIN F. DAVIS.

IX. DEPARTMENT OF OBSTETRICS AND GYNECOLOGY

OFFICERS OF INSTRUCTION

JOHN CLARENCE WEBSTER, M.D., F.R.C.P. (Edin.), Professor and Head of the Department of Obstetrics and Gynecology.

RUDOLPH WIESER HOLMES, M.D., Associate Professor of Obstetrics and Gynecology.

ALBERT BELCHAM KEYES, M.D.; FRANK WORTHINGTON LYNCH, M.D.; CHARLES EVART PADDOCK, M.D.; CAREY CULBERTSON, M.D.; W. GEORGE LEE, M.D.; NOBLE SPROAT HEANEY, M.D., Assistant Professors of Obstetrics and Gynecology.

HARRY EDGAR MOCK, M.D.; FRANZ HEINRICH HARMS, M.D.; MARY M. S. JOHNSTONE, M.D., Instructors in Obstetrics and Gynecology.

CARL H. DAVIS, M.D.; WILLIAM FRANCIS HEWITT, S.B., M.D.; RICHARD HUIZENGA, M.D., Associates in Obstetrics and Gynecology.

KAETHE WELLER DEWEY, M.D., Assistant in Obstetrics and Gynecology.

INTRODUCTORY

The subjects of Obstetrics and Gynecology are taught in the Junior and Senior years in laboratory, recitation, and conference courses, in Dispensary and Hospital clinics, and in the conduct of labor in the homes of patients.

COURSES OF INSTRUCTION

OBSTETRICS

I. JUNIOR YEAR

1. Conference Course.—Anatomy and physiology of pregnancy, bacteriology of genital tract, diagnosis of uterine pregnancy, multiple gestation, hygiene and management of pregnancy, clinical phenomena of normal labor. Tu., Th., 4:00-5:00. 4Mj. Autumn, ASSISTANT PROFESSOR HEANEY.

2. Conference Course.—Anatomy and physiology of normal labor, conduct and management of labor, asepsis in obstetrics, anatomy and physiology of puerperium, management of puerperal state, ectopic gestation, toxemia of pregnancy, eclampsia, premature expulsion of ovum, diseases of ovum. Prerequisite: course 1. Tu., Th., 4:00-5:00. 4Mj. Winter, ASSISTANT PROFESSOR PADDOCK.

4. Obstetric Operations and Manipulations.—A lecture and conference course. Occipito-posterior, face, brow, pelvic, transverse presentations, prolapse of cord, arms, legs, anomalies of the bony pelvis, artificial interruption of pregnancy, version, forceps, symphysiotomy, pubiotomy, embryotomy, Caesarian section. Prerequisite: courses 1 and 2. Tu., Th., 8:00. 24 hours. 4Mj. Spring, ASSOCIATE PROFESSOR HOLMES.

II. JUNIOR OR SENIOR YEAR

4A. Operative Obstetrics.—Manipulations on the manikin. Supplemental to course 4. Prerequisite: course 4. Limited to 10 students. 22 hours. 2Mj. Second Term, Spring; each Term of Summer, Autumn, and Winter. Sec. a: Tu., F., 11:00-1:00; sec. b: W., Sat., 11:00-1:00. ASSISTANT PROFESSOR LEE OR DR. HARMS, DR. DAVIS, OR DR. HEWITT.

III. SENIOR YEAR

3. Conference Course.—Pathology of pregnancy (continued), pathology of labor, anomalies of expellant powers and soft passages, placenta praevia, ablatio

placentae, hemorrhage during third stage, postpartum hemorrhage, retained placenta, adherent placenta, rupture of uterus, inversion of uterus, pathology of the puerperium. Prerequisite: courses 1 and 2. Tu., Th., 8:00. 4Mj. Autumn, ASSOCIATE PROFESSOR HOLMES OR ASSISTANT PROFESSOR LEE.

5. Clinical Obstetrics.—In the maternity department of the Presbyterian Hospital, St. Luke's Hospital, Chicago Lying-in Dispensary, and Central Free Dispensary. Prerequisite: courses 1, 2, 4, and 4A. 2Mj. Throughout the year. PROFESSOR WEBSTER, ASSISTANT PROFESSORS LYNCH, PADDOCK, CULBERTSON, HEANEY, AND DRs. HARMS, DAVIS, AND HEWITT. Attendance upon cases of confinement in various hospitals and at the homes of patients is required of each student before graduation. Each student will be summoned to cases at the time of delivery and will attend the patients during and after delivery, under supervision. Clinical records must be kept by students and certificates obtained.

GYNECOLOGY

I. JUNIOR YEAR

7. Conference Course in Gynecology.—Anatomy of the pelvic floor; puberty, menstruation; case taking and physical examination; minor therapeutic measures. M., W., 5:00–6:00. 4Mj. Autumn, ASSISTANT PROFESSOR KEYES.

7A. Conference Course in Gynecology.—Injuries and displacements of the pelvic floor; affections of the vulva and vagina; malformation, inflammation, displacements, and neoplasms of the uterus. Prerequisite: course 7. Tu., Th., 5:00–6:00. 4Mj. Winter, ASSISTANT PROFESSOR HEANEY.

7B. Conference Course in Gynecology.—Affections of the Fallopian tubes and ovaries; ectopic gestation; affections of the peritoneum and cellular tissue, bladder and urethra; sterility. Prerequisite: course 7. M., W., 5:00–6:00. 4Mj. Spring, ASSISTANT PROFESSOR LYNCH.

II. JUNIOR AND SENIOR YEARS

6. Laboratory and Demonstration Course.—A gross and microscopic study of the female genitalia, both normal and pathologic, including the changes found in menstruation and in pregnancy. Limited to 12 students. Each Quarter, W., Sat., 11:00–1:00. 48 hours. 4Mj. ASSISTANT PROFESSOR CULBERTSON, DR. HARMS, OR DR. DAVIS.

8. Dispensary Clinics.—Conferences in practical gynecology. Prerequisite: course 6 or 7. Limited to 5 in each section. 24 hours. 4M. Each Term throughout the year. Sec. a: M., Th., 11:00–1:00, DRs. MOCK AND HUIZENGA; sec. b: Tu., F., 11:00–1:00, DRs. JOHNSTONE AND DAVIS; sec. c: W., Sat., 11:00–1:00, DRs. HARMS, HEWITT, AND DEWEY.

III. SENIOR YEAR

9. College Clinics.—In Gynecology and Obstetrics. Prerequisite: course 7. 48 hours. 4Mj. Each Quarter throughout the year. W., Sat., 11:00–1:00. PROFESSOR WEBSTER AND ASSISTANT PROFESSORS KEYES AND LYNCH.

10. Clinical Course at the Cook County Hospital.—A clinical course in Gynecology. Limited to 10 students. Hours to be announced. 24 hours. 2Mj. Autumn, Winter, and Spring, ASSISTANT PROFESSOR CULBERTSON.

11. Special Laboratory Work.—For a limited number of students selected by the Department staff.

Operative Obstetrics for Postgraduates.—Diagnosis; indications for operation; choice of procedure. Technique of all obstetrical operations. Prognosis, the technique of forceps, version, craniotomy, decapitation will be practiced upon the manikin. Obstetrical injuries to the fetus and treatment. Course limited to from 5 to 10 students. Duration, time, and price to be arranged. ASSISTANT PROFESSOR HEANEY.

X. DEPARTMENT OF LARYNGOLOGY AND OTOTOLOGY

OFFICERS OF INSTRUCTION

EPHRAIM FLETCHER INGALS, A.M., M.D., Professor of Diseases of the Chest, and of Laryngology and Otology, and Head of the Department of Laryngology and Otology.

JOHN EDWIN RHODES, A.M., M.D.; OTTO TIGER FREER, M.D.; GEORGE ELMER SHAMBAUGH, Ph.B., M.D., Associate Professors of Diseases of the Chest, and of Laryngology and Otology.

GEORGE ABRAHAM TORRISON, A.B., M.D.; ELMER LAWTON KENYON, A.B., M.D.; STANTON ABELES FRIEDBERG, M.D.; DAVID FISKE, M.D.; THOMAS WILLIAMS LEWIS, S.B., M.D.; GEORGE WILLIAM BOOT, M.D.; ROBERT SONNENSCHNEIN, M.D., Assistant Professors of Laryngology and Otology.

DANIEL BERNARD HAYDEN, M.D.; HENRY H. EVERETT, M.D.; HENRY PATTERSON BAGLEY, M.D.; JOHN CHARLES WILLIAMS, M.D.; EDWARD P. NORCROSS, M.D., Instructors in Laryngology and Otology.

EDWIN MCGINNIS, A.B., M.D., Associate in Laryngology and Otology.

STEPHEN HRYNIEWIECKI, M.D.; BENJAMIN BRAUDE, S.M., M.D.; SPENCER C. DICKERSON, M.D., Assistants in Laryngology and Otology.

INTRODUCTORY

COURSES

Every physician before beginning the practice of medicine should have a working knowledge of the whole field, and should be equipped to diagnose the more common diseases generally included in the specialties, and to apply judicious early treatment. These courses are, therefore, designed, not for specialists, but to furnish students a knowledge of those special diseases with which they must have to do in general practice.

A total of 1.2Mjs. is required in this Department, but it is recommended that more be taken if time permits. Credit will not be allowed for a course repeated until all of the required work in the Department has been completed. Courses 1 and 2 are prerequisite for the clinical courses. Students will be allowed to register for courses 1 and 2 in the Summer Quarter. Students who have taken course 1 in the Spring Quarter will be allowed to register for courses 2 and 3 in the Summer Quarter.

COURSES FOR PRACTITIONERS

Physicians desirous of gaining a better knowledge of the work in the special fields of Laryngology and Otology may register for any of the courses in the Department. Opportunity is offered for the study of the special anatomy and physiology of these subjects as well as for clinical study. Courses 4, 5, and 7 are suited for this purpose.

COURSES OF INSTRUCTION

1. **Rhinology, Laryngology, and Otology.**—Introductory lecture course. Prerequisite for the clinical courses. Lectures: Tu., Th., 8:00. .4Mj. Spring (for Juniors), ASSOCIATE PROFESSOR SHAMBAUGH AND ASSISTANT PROFESSOR

SONNENSCHNEIN. Summer (for Seniors), ASSISTANT PROFESSOR FISKE AND DR. NORCROSS. One hour will be devoted to the defects of speech by ASSISTANT PROFESSOR KENYON.

2. Nose, Throat, and Ear.—Practical courses in the Dispensary in the technique of examination in the objective study of the normal and the commoner pathological conditions of the nose, throat, and ear, and intubation of the larynx. Sections limited to six students. Prerequisite for the succeeding clinical courses. Each Quarter throughout the year. From 2:00 to 4:00 each clinic day. 48 hours. .4Mj.

Summer: sec. *a*: M., Th., ASSISTANT PROFESSOR FISKE AND DR. EVERETT; sec. *b*: Tu., F., ASSISTANT PROFESSORS TORRISON AND BOOT; sec. *c*: W., Sat., ASSISTANT PROFESSOR LEWIS AND DR. HAYDEN.

Autumn, Winter, and Spring.—Sec. *a*: ASSISTANT PROFESSORS FISKE AND SONNENSCHNEIN AND DR. WILLIAMS; sec. *b*: ASSISTANT PROFESSORS TORRISON AND BOOT AND DR. NORCROSS; sec. *c*: ASSISTANT PROFESSOR LEWIS AND DR. HAYDEN, BAGLEY, AND MCGINNIS.

2F. Nose, Throat, and Ear.—Clinical and practical course at the Cook County Hospital. Similar to course 3. Prerequisite: courses 1 and 2. Limited to 10 students. M., Th., 2:00–4:00. 48 hours. .4Mj. Autumn, Winter, and Spring, ASSISTANT PROFESSORS FRIEDBERG AND BOOT.

3. Clinical Courses.—Prerequisite: courses 1 and 2. Students who have taken course 1 in the Spring Quarter will be allowed to register for courses 2 and 3 in the Summer Quarter. Each Quarter throughout the year. Students may register for both sections *a* and *b* in the same quarter, or may take the sections in different quarters.

Sec. *a*: Diseases of the Nose and Throat. W., 2:00–4:00. 24 hours. .2Mj. Summer, ASSISTANT PROFESSOR SONNENSCHNEIN; Autumn, ASSOCIATE PROFESSOR RHODES AND ASSISTANT PROFESSOR LEWIS. Winter, ASSOCIATE PROFESSOR FREER. Spring, ASSISTANT PROFESSOR TORRISON. Each quarter one clinic period will be devoted to bronchoscopy and oesophagoscopy by ASSISTANT PROFESSOR FRIEDBERG, and one period to the defects of speech by ASSISTANT PROFESSOR KENYON.

Sec. *b*: Diseases of the Ear. F., 2:00–4:00. 24 hours. .2Mj. Autumn, Winter, and Spring, ASSOCIATE PROFESSOR SHAMBAUGH; Summer, F., 2:00–4:00, ASSISTANT PROFESSOR BOOT.

6. Student Assistants in the Dispensary.—One student for each section, from either the Junior or Senior class, may register each quarter for work as an assistant in the Dispensary. Sec. *a*: M., Th.; sec. *b*: Tu., F.; sec. *c*: W., Sat., 2:00–4:00. 48 hours. .4Mj.

7. Surgical Anatomy of the Ear.—A course for advanced students and practitioners. Class limited to 6 students. 12 hours. .2Mj. Autumn, W., 3:00–4:00, DR. HAYDEN; Winter, Tu., 3:00–4:00, ASSISTANT PROFESSOR BOOT.

8. Surgical Anatomy, Physiology, and Pathology of the Nose and Throat.—A course for advanced students and practitioners. Class limited to 6 students. M., 4:00–5:00. 12 hours. .2Mj. Summer and Winter, ASSISTANT PROFESSOR SONNENSCHNEIN.

10. Defects of Speech.—A lecture and clinical course offered to graduate students and to Seniors who have completed 1.2Mjs. of work in the Department. From the standpoint of the anatomy and physiology of speech-production the important disorders of speech are considered, including defects of articulation, stammering, the aphonias organic and functional, the difficulties of public speakers and singers, etc. 8 to 12 hours. .1Mj. Summer, ASSISTANT PROFESSOR KENYON.

XI. DEPARTMENT OF OPHTHALMOLOGY

OFFICERS OF INSTRUCTION

WILLIAM HAMLIN WILDER, M.D., Professor and Head of the Department of Ophthalmology.

EDWARD VAIL LAPHAM BROWN, M.D.; JOHN BERNARD ELLIS, M.D.; FRANCIS LANE, M.D., Assistant Professors of Ophthalmology.

CHARLES GILCHRIST DARLING, M.D.; WILLIAM GEORGE REEDER, M.D., Instructors in Ophthalmology.

ALBERT MARVIN HALL, M.D.; HENRIETTA MAE FARQUHARSON, M.D.; EMORY HILL, M.D., Associates in Ophthalmology.

MAJOR HENRY WORTHINGTON, M.D.; WILLIAM HUGH FOLSOM, M.D., Assistants in Ophthalmology.

AT THE ILLINOIS EYE AND EAR INFIRMARY

OSCAR DODD, M.D., Assistant Clinical Professor (*Extra-mural*).

INTRODUCTORY

UNDERGRADUATE COURSES

A total of .8 major in Ophthalmology is required for graduation.

Every well-educated physician should have a general knowledge of ophthalmology.

The work in this Department is arranged so that the student first gets a general survey of the subject through lecture and recitation courses.

In the same quarter, or the following one, through the courses in "practical ophthalmology" he is taught the methods of examination of the eye by various tests, the necessary manipulations for treatment, and the use of the ophthalmoscope by practical exercises on schematic and living eyes. For this work each student must provide himself with an ophthalmoscope.

All this is *preliminary* and *prerequisite* to the clinical courses, in which the student is given the privilege of examining the cases, of studying the progress of the diseases and the effect of the treatment from day to day, and also of witnessing the technic of the operations on the eye. These clinics are on the conference plan, and each exhibition of cases is followed by a discussion on the etiology, pathology, symptomatology, and treatment of the diseases under observation.

Practical courses in refraction are offered for undergraduates and also for practitioners of medicine, in which the methods of fitting glasses are taught.

Special courses for small classes on the normal and morbid anatomy, histology, and bacteriology of the eye are made particularly instructive by the exhibition of anatomical preparations and microscopic slides.

GRADUATE COURSES

Courses will be arranged for physicians who desire to prepare themselves for the practice of ophthalmology, comprising instruction in the anatomy, physiology, bacteriology, and pathology of the eye, in ophthalmoscopy and refraction, and opportunities for clinical work as assistants in the Central Free Dispensary and elsewhere. Preparation for such special practice should be undertaken only by physicians who have had considerable experience in general

practice, and should extend over at least six quarters. These need not, however, be taken consecutively but may be attended one, two, or more quarters at a time, at the convenience of the practitioner.

COURSES OF INSTRUCTION

1. **Diseases of the Eye.**—A lecture and recitation course. 24 hours. .4Mj. Summer (Seniors), Tu., F., 4:00–5:00, DR. REEDER; Autumn (Seniors), Tu., F., 4:00–5:00, DR. DARLING; Winter (Seniors), M., Th., 4:00–5:00, ASSISTANT PROFESSOR ELLIS; Spring (Juniors), W., F., 8:00–9:00, ASSISTANT PROFESSOR BROWN.

2. **Practical Ophthalmology in the Central Free Dispensary.**—Limited to 10 students in each section. Each Term of every Quarter, 2:00–3:00. 12 hours. .2Mj. Sec. a: M., Th., Summer and Winter, DR. FARQUHARSON; Autumn and Spring, DR. ELLIS. Sec. b: Tu., F., Summer and Winter, DR. REEDER; Autumn and Spring, DR. DARLING. Sec. c: W., Sat., each Quarter, DR. HILL.

Courses 1 and 2 may be taken in the same quarter, but both are prerequisite to all clinical courses.

3. **Clinical, Conference, and Lecture Course.**—Prerequisite: courses 1 and 2. Limited to 20 students. Each Quarter, M., Th., 3:00–4:00. 24 hours. .2Mj. Summer, ASSISTANT PROFESSOR ELLIS; Autumn, Winter, and Spring, PROFESSOR WILDER.

4. **Clinical Course on the Eye at the Illinois Charitable Eye and Ear Infirmary.**—Prerequisite: courses 1 and 2. Limited to 10 students each. Each Quarter except Summer. 24 hours. .2Mj. 4 A, M., 2:00–4:00, ASSISTANT PROFESSOR LANE; 4 B, F., 2:00–4:00, ASSISTANT PROFESSOR (*extra-mural*) DODD.

5. **Clinical Courses at the Cook County Hospital.**—In these courses special attention is given to the relation of the eye to general disease. Prerequisite: courses 1 and 2. Limited to 8 students. Th., 2:00–4:00. 24 hours. .2Mj. Autumn, DR. DARLING; Winter and Spring, ASSISTANT PROFESSOR BROWN.

6. **Normal and Pathological Anatomy and Bacteriology of the Eye.**—A course for advanced students and practitioners. Limited to 5 students. One Term. Sat., 3:00–5:00. 24 hours. .2Mj. Summer, University of Chicago, ASSISTANT PROFESSOR BROWN (see course Pathology 6); Autumn, 3 days each week, Eye and Ear Infirmary, ASSISTANT PROFESSOR LANE.

6A. **Special Work for Student Assistants in the Dispensary.**—Junior or Senior students who have had courses 1 and 2 may register as follows:

Monday, Thursday	Two students	2:00–4:00
Tuesday, Friday	Two students	2:00–4:00
Wednesday, Saturday	Two students	2:00–4:00
Each Quarter.	.2Mj.	

7. **Refraction.**—A practical course (optional) for undergraduates. Limited to 10 students. One Term of Autumn, Winter, and Spring Quarters. 2:00–3:00, two days a week. 12 hours. .1Mj. DR. DARLING.

8. **Refraction.**—A special course for practitioners. Limited to 6 students. Tuition \$25.00. Summer and Spring. Hours to be arranged.

XII. DEPARTMENT OF SKIN AND VENEREAL DISEASES

OFFICERS OF INSTRUCTION

OLIVER SAMUEL ORMSBY, M.D., Professor and Head of the Department of Skin and Venereal Diseases.

ERNEST LEWIS McEWEN, S.M., M.D., Assistant Professor of Skin and Venereal Diseases.

WILLIAM AUGUSTUS QUINN, M.D.; WILLIAM J. M. CUNNINGHAM, M.D., Instructors in Skin and Venereal Diseases.

ERNEST WILLIAM POTTHOFF, M.D.; ARTHUR NORTON MACKEY, M.D., Associates in Skin and Venereal Diseases.

JOHN FRANK WAUGH, M.D.; BENJAMIN BARKER BEESON, M.D.; EDWARD ALLEN OLIVER, M.D., Assistants in Skin and Venereal Diseases.

JAMES HERBERT MITCHELL, M.D., Research Fellow in Dermatology (*James Nevins Hyde Memorial Fund*), Assistant in Cutaneous Pathology.

INTRODUCTORY

The work of this Department is elective and offered to members of the Senior class. Instruction is given by clinical teaching in the College Amphitheater, the Dispensary, and the Cook County Hospital, by recitations, and by demonstrations to small classes of clinical, bacteriologic, and pathologic phenomena.

Instruction in this Department is supplemental by ample use of the large collection of dermatological plates, atlases, and photographs arranged in cases in proximity to the upper amphitheater; also by use of the Baretta Models procured in Paris for use of this Department.

It is suggested that students begin work in this Department by taking course 1 (open to Juniors in the Spring Quarter), and every student is expected to follow this with course 2. The textbooks used are Ormsby, *Diseases of the Skin*, and Hyde and Montgomery's, *Manual of Syphilis and the Venereal Diseases*.

COURSES OF INSTRUCTION

1. Skin, Genito-urinary, and Venereal Diseases.—A recitation and conference course given to the class in sections not exceeding 25. Tu., F., 4:00–5:00. 24 hours. .4Mj. Summer, DR. CUNNINGHAM; Autumn, DR. QUINN; Winter, DR. MACKEY; Spring, DR. OLIVER.

2. Clinical Course.—A clinical course on the subject of Skin, Genito-urinary, and Venereal Diseases. The clinic has been conducted in the College for many years and is attended by a large number of out-patients of both sexes and all ages. Each Quarter throughout the year. Tu., F., 2:00–4:00. 48 hours. .4Mj. Autumn and Spring, PROFESSOR ORMSBY; Summer and Winter, ASSISTANT PROFESSOR McEWEN.

3. Clinical Course in the Central Free Dispensary.—A clinical course given to the class in small sections in the dermatological and genito-urinary departments of the Central Free Dispensary. The student is here brought in personal contact with patients and required to examine and prescribe for them as in private practice. 24 hours. .4M. Each Term throughout the year, daily, 2:00–4:00. Sec. a: M., Th., DRs. QUINN AND BEESON; sec. b: Tu., F., DRs. MACKEY, CUNNINGHAM, AND OLIVER; sec. c: W., Sat., ASSISTANT PROFESSOR McEWEN AND DR. POTTHOFF.

5. Syphilis.—A clinical and lecture course at the Cook County Hospital comprising a general survey of the subject of syphilis. Hours to be announced. 12 hours. .2Mj. Autumn, Winter, and Spring, ASSISTANT PROFESSOR McEWEN.

6. Histopathology and Bacteriology of the Skin.—A demonstration course including instruction and practical work in methods peculiar to the study of cutaneous pathology and bacteriology. Open to practitioners and limited to 8 students. Hours to be arranged. 24 hours. .4M. Summer, Autumn, and Spring, DR. BEESON.

XIII. GENERAL LECTURES AND OPTIONAL COURSES

1. **Medical Jurisprudence.**—A lecture course supplemented by recitations and conferences. Hours to be announced. .6M. Winter.

2. **The History of Medicine (Optional).**—A lecture course by PROFESSOR DODSON. Hours to be announced. .1Mj. Winter.

3. **Examinations for Life Insurance (Optional).**—A lecture and conference course on the nature and purpose of life insurance; the duties and essential qualifications of the examiner for life insurance, etc. 12 hours. Hours to be announced. .2Mj. Winter, PROFESSOR DODSON, ASSOCIATE PROFESSOR LINNELL, AND ASSISTANT PROFESSOR STEVENSON.

4. **Medical Economics (Optional).**—A lecture course in medical economics and ethics. 6 hours. Hours to be announced. .1Mj. Winter.

 LABORATORIES, EQUIPMENT, AND LIBRARIES AT THE
UNIVERSITY OF CHICAGO

THE HULL BIOLOGICAL LABORATORIES

On December 14, 1895, Miss Helen Culver, of the city of Chicago, presented to the University of Chicago property valued at \$1,000,000—the whole gift, according to the terms of the letter of endowment, to be devoted to the increase and spread of knowledge within the field of the biological sciences. From this fund there have been erected, at the north end of the University grounds, four buildings to serve as laboratories for the Anatomical, Botanical, Physiological, and Zoölogical Sciences. Medical instruction is given in the Anatomical, Physiological, and Zoölogical Laboratories.

THE ANATOMICAL LABORATORY

The Anatomical Laboratory is 120 by 50 feet, and four stories high, exclusive of the basement and attic, and was constructed to provide for Anatomy, both gross and microscopic, including Neurology. In the basement are special rooms for keeping frogs and similar animals at low temperatures, a bone-room, a storage room for anatomical material, and a crematory. The first floor is occupied by three large laboratories for microscopic work (Histology, Microscopic Anatomy, Neurology, and Pathology), and a large photographic room containing a stone pier and connected with a dark-room. On the second floor there is an additional room for general classwork in microscopic branches, a lecture-room, and an osteological laboratory. Here, too, are located the laboratories of the staff in Neurology and a laboratory for advanced work and original research in Neurology. On the third and fourth floors are situated the dissecting rooms for Human Anatomy, the private laboratories for instructors and research workers, and two laboratories for the making of special preparations. In the attic there is a well-lighted operating room adjoining a large animal room; in addition, several store-rooms are situated here. The laboratories are well equipped for work in gross and microscopic Anatomy and in Pathology, and especial facilities are afforded for advanced work and original research.

THE PHYSIOLOGICAL LABORATORY

The Physiological Laboratory is 102 by 52 feet and four stories high, exclusive of the basement and attic. The basement contains a cold-storage room, aqua-

rium room, an animal room, dark-room, and storerooms. It is connected with the greenhouse of the laboratory. The first floor contains general laboratories for beginners, a shop, a storeroom, a lecture-room, and a photographic room. The second floor contains a large lecture-room with preparation room and storeroom, the departmental library, an optical room, two dark-rooms, and private laboratories. The third floor contains two laboratories for advanced workers in Physiology, a laboratory for beginners in Physiological Chemistry and Pharmacology, a balance-room, and several smaller rooms for work in Physiological Chemistry and Pharmacology. The fourth floor contains two rooms with cages for animals and two operating rooms. In addition, two laboratories for work in Physiological Chemistry and Pharmacology, a combustion room, and a room for work in gas-analysis. The laboratories are well equipped, both for general instruction in Physiology, Physiological Chemistry, and Pharmacology, and for advanced and research work in these sciences.

THE ZOÖLOGICAL LABORATORY

The Zoölogical Laboratory is 120 by 50 feet, and four stories high, exclusive of the basement. On the first floor are located the library of the biological departments, a synoptical museum, a large laboratory for elementary Zoölogy, and a laboratory for research work in Pathology. The second floor contains one large laboratory for beginners in research, and a number of smaller laboratories for more advanced work. The third floor contains three large laboratories for comparative Anatomy and Embryology, and a number of rooms for research. The fourth floor is devoted to the laboratories of Bacteriology, which are supplied with sterilizers, incubators, special microscopes, and other bacteriological apparatus, and are furnished with tables for microscopical work and for the usual laboratory manipulations. The basement contains one large room with glass-covered extension on the south side, designed for an aquarium; two rooms for use as aviaries, vivaria, etc.; one room for paleontological material; and one for taxidermy and museum purposes. The best optical and other apparatus demanded by zoölogical work is provided. There are series of models and charts illustrating embryological and morphological subjects, and ample facilities for keeping land and aquatic animals under favorable conditions for study.

THE HOWARD TAYLOR RICKETTS LABORATORY

The laboratories of Pathology, Bacteriology, and Hygiene occupy this building, located on Ellis Avenue between Fifty-seventh and Fifty-eighth streets, erected in 1914, and first occupied about January 1, 1915. It was built by the University from funds appropriated by the Trustees and named in honor of Assistant Professor Howard Taylor Ricketts, who lost his life from typhus fever while engaged in an investigation of this disease in Mexico City. The building is 180 by 100 feet, and one story high. The north half is occupied by the Department of Hygiene and Bacteriology; the south half by the Department of Pathology; a common lecture room seating 110 forming a center wing. Each department has a separate animal house forming smaller wings on the main building, and, in addition to the laboratories for general classwork, well-equipped smaller laboratories for research work, including chemical laboratories, operation, autopsy, preparation, and storerooms, and two small recitation rooms.

THE KENT CHEMICAL LABORATORY

The Chemical Laboratory was provided by the generosity of Mr. Sidney A. Kent, is 176 by 64 feet, and is three stories high exclusive of the basement. An amphitheater seating 750 people forms an annex to the building. Lectures are given in rooms on the first floor. The laboratory instruction in General Inorganic and Elementary Organic Chemistry is given on the third floor in three large laboratories accommodating 300 students. Each student is given a separate desk supplied with gas and water and is furnished with all the necessary chemicals and apparatus. The laboratories for analytical Chemistry are on the second and third floors. The advanced work in Chemistry is done in general and private laboratories on the first and second floors. There are a number of small rooms used as balance, combustion, gas-analysis, photographic rooms, etc. The Chemical Library contains full sets of the most important journals, books of reference, and other works relating to Chemistry.

THE LIBRARIES

The General Library is for the use of students in all departments of the University. Students who have matriculated and paid their library fee may take at one time three volumes from the General Library. These may be kept two weeks, and at the end of that time, if desired, may be renewed for two weeks. Former students may continue the use of the Library by the payment of the library fee of \$2.50 per quarter.

The total number of books at present in the Library is approximately 403,000 accessioned. Number of volumes in Departmental Libraries of departments concerned in medical instruction, May 1, 1915: Biology, including Anatomy, Neurology, Physiology, Bacteriology, Pathology, Zoölogy, Physiological Chemistry, and Pharmacology, 26,000; Chemistry, 3,356; Physics, 3,731.

In addition thereto are many thousand volumes not yet catalogued.

All the branch and departmental libraries are catalogued and classified.

The General Library is open on every week-day from 8:00 A.M. to 10:00 P.M. The Library receives 2,532 current periodical publications, including the transactions and proceedings of learned societies. The Departmental Libraries are closed at 10:00 P.M.

The students of the University are permitted to use the books and periodicals in the Newberry Library and in the Crerar Library, both of which contain a large number of medical and general scientific works.

The Public Library of Chicago is also available to medical students for general reading.

BUILDINGS, EQUIPMENT, AND HOSPITAL FACILITIES AT RUSH MEDICAL COLLEGE

THE CLINICAL BUILDING, located at West Harrison and Wood streets, is 60 by 80 feet, and four stories in height. The first floor is occupied by the college library and reading-room. On the second floor are situated the offices of the College, the lower amphitheater, seating 400, and clinical waiting-rooms. The third floor contains the upper amphitheater, seating 530 persons, a large surgical examining- and dressing-room, five clinical examining-rooms, and a

waiting-room for patients. The fourth floor is occupied in part by the upper amphitheater, and in part by the laboratory for surgical and orthopedic appliances and bandaging.

THE LIBRARY AND READING-ROOM occupies the first floor of the Clinical Building, a most convenient location for students. The library contains 20,772 volumes, 4,516 pamphlets, 12,979 reprints, and files of all the leading medical journals in English, German, and French. During the last college year the library had a daily average attendance of 163 students.

SENN HALL, erected through the munificence of the late Professor Senn and other members of the Faculty, adjoins the Clinical Building on the east. It covers a ground space of 40 by 90 feet, is seven stories in height (including the basement), and of absolutely fireproof construction. The basement and first three floors, affording over 10,000 square feet of floor space, are devoted to the dispensary and the clinical teaching connected therewith. The fourth and fifth floors are occupied by clinical laboratories and recitation rooms. The remaining two stories contain two surgical and medical amphitheatres, seating about 150 each, with necessary waiting and preparation rooms.

THE LABORATORY BUILDING, on the south side of Harrison Street, is 100 by 45 feet in area, and six stories in height (including the basement). The basement is occupied by storage-rooms for apparatus, an animal room for the laboratory of Pathology and Bacteriology, and a cloak-room for students. Adjoining the basement is a separate building for the preparation and storage of cadavers by the cold-storage process, with a capacity for about two hundred bodies. The first and second stories are devoted to the Department of Pathology and Bacteriology which is fully equipped with the necessary microscopes and other apparatus for advanced work in these branches. The third floor is occupied by the Department of Chemistry and Toxicology and is supplied with all the necessary apparatus and materials for advanced work in these branches in their relation to practical medicine. The fourth floor contains four recitation rooms and a laboratory for Pharmacy and Therapeutics. The fifth floor is devoted to advanced work in practical Gross Anatomy and to Operative Surgery.

THE PRESBYTERIAN HOSPITAL, with accommodations for about 300 patients, adjoins the College, and is connected with it, so that patients may be transferred directly from the wards to the clinical amphitheatres. In this hospital over 5,000 patients are treated annually, and it thus affords a large amount of valuable material for the clinics.

ATTENDING STAFF OF THE PRESBYTERIAN HOSPITAL

MEDICINE

Attending Physicians: DRs. FRANK BILLINGS, JAMES B. HERRICK, BERTRAM W. SIPPY. *Associate Attending Physicians:* JAMES MURRAY WASHBURN, ROLLIN T. WOODYATT, ERNEST E. IRONS, RALPH C. BROWN. *Assistant Attending Physicians:* THEODORE TIEKEN, B. M. LINNELL, L. M. LOEB, JOHN L. JACQUE, EDWARD C. ROSENOW, WILBER E. POST, SIDNEY STRAUSS, KARL K. KOESSLER, WALTER W. HAMBURGER, ALEXANDER F. STEVENSON, JAMES R. GREER, JOHN H. McCLELLAN.

Resident Physicians: DRs. RUSSELL M. WILDER, DONALD P. ABBOTT.

DISEASES OF CHILDREN

Consulting Physician: DR. ALFRED C. COTTON.

Attending Physicians: DRs. JOHN M. DODSON, CLIFFORD G. GRULEE.
Assistant Attending Physicians: DRs. FRANK W. ALLIN, JAMES PATTERSON,
 AUGUST STRAUCH, WALTER F. WINHOLT.

PSYCHIATRY AND NEUROLOGY

Attending Physicians: DRs. THOR ROTHSTEIN, PETER BASSOE. *Assistant Attending Physicians:* DR. GEORGE W. HALL.

SURGERY

Consulting Surgeons: DR. DAVID W. GRAHAM; WILLIAM T. BELFIELD.
Attending Surgeons: DRs. ARTHUR DEAN BEVAN, DEAN D. LEWIS. *Associate Attending Surgeon:* DR. CARL B. DAVIS. *Assistant Attending Surgeons:* DRs. CHARLES A. PARKER, D. B. PHEMISTER, PAUL OLIVER, F. B. MOOREHEAD, GEORGE G. DAVIS, EVARTS A. GRAHAM, V. C. DAVID, BENJAMIN F. DAVIS.
Attending Urologist: DR. H. L. KRETSCHMER. *Anaesthetist:* DR. ISABELLA HERB.

Resident Surgeon: GATEWOOD, M.D.

OBSTETRICS AND GYNECOLOGY

Attending Obstetricians and Gynecologists: DRs. JOHN CLARENCE WEBSTER, A. BELCHAM KEYES, FRANK W. LYNCH. *Assistant Attending Obstetricians and Gynecologists:* DRs. CAREY CULBERTSON, NOBLE S. HEANEY, CARL H. DAVIS.
Out-patient Department: DRs. FRANZ H. HARMS, WILLIAM F. HEWITT.

LARYNGOLOGY AND OTOTOLOGY

Attending Laryngologists: E. FLETCHER INGALS, OTTO T. FREER, STANTON A. FRIEDBERG. *Assistant Attending Laryngologists:* DRs. GEORGE TORRISON, HENRY H. EVERETT.

Attending Aurist: DR. GEORGE E. SHAMBAUGH. *Assistant Attending Aurists:* DRs. GEORGE W. BOOT, EDWARD P. NORCROSS.

OPHTHALMOLOGY

Attending Ophthalmologist: DR. WILLIAM H. WILDER. *Assistant Attending Ophthalmologists:* DRs. E. V. L. BROWN, JOHN B. ELLIS, FRANCIS LANE, CHARLES G. DARLING.

DERMATOLOGY

Attending Dermatologist: DR. OLIVER S. ORMSBY. *Assistant Attending Dermatologists:* DRs. ERNEST L. McEWEN, J. FRANK WAUGH.

PATHOLOGY

Attending Pathologists: DRs. LUDVIG HEKTOEN, EDWIN R. LeCOUNT.

Resident Pathologist: ———.

Serologist: DR. HOMER K. NICOLL.

CHEMISTRY

Attending Chemist: DR. WALTER S. HAINES.

X-RAY DEPARTMENT

Attending Roentgenologist: DR. JOSEPH W. ROWNTREE.

THE CHILDREN'S MEMORIAL HOSPITAL, with six buildings and about 170 exclusively free beds, provides an exceptionally valuable clinical material for the study of the medical and surgical affections of infancy and childhood. Under the contract entered into between the trustees of this hospital and Rush Medical College, this material is made available to the Faculty and students of Rush Medical College for instruction and research.

ATTENDING STAFF OF THE CHILDREN'S MEMORIAL HOSPITAL

Consulting Staff: DRs. WALTER S. HAINES, ARTHUR D. BEVAN, E. FLETCHER INGALS, JOHN M. DODSON, LUDVIG HEKTOEN, FRANK BILLINGS, J. CLARENCE WEBSTER, ALFRED C. COTTON, WILLIAM H. WILDER, OLIVER S. ORMSBY, GEORGE F. SHAMBAUGH, MALCOLM L. HARRIS.

Attending Physicians: DRs. FRANK S. CHURCHILL, SAMUEL J. WALKER, HENRY F. HELMHOLZ, SAMUEL AMBERG. *Assistants:* DRs. G. L. KAUFFMAN, GEORGE E. BAXTER, CHARLES SCHOTT, LELAND E. PHIPPS, H. H. KLEINPELL, LORIN C. COLLINS, SIGURD KRAFT, LOUIS W. SAUER.

Attending Neurologist: DR. THOR ROTHSTEIN.

Attending Surgeons: DRs. COLEMAN G. BUFORD AND ———. *Assistants:* DRs. HERMAN L. KRETSCHMER, JOHN A. GRAHAM, FLOYD B. RILEY.

Attending Orthopedic Surgeon: DR. EDWIN W. RYERSON. *Assistants:* DRs. ROBERT O. RITTER, NATHANIEL C. NELSON.

Attending Laryngologists: DRs. DAVID FISKE, GEORGE W. BOOT. *Assistant*

Attending Laryngologists: DRs. JOHN C. WILLIAMS, EDWARD P. NORCROSS.

Attending Ophthalmologist: DR. ALFRED M. HALL. *Assistant:* DR. MAJOR HENRY WORTHINGTON.

Attending Dermatologist: DR. ARTHUR N. MACKAY.

Pathologist: DR. FLOYD B. RILEY, *pro tem.*

Resident Physician: DR. WILLIAM B. McCLURE. *Assistant Resident Physician:* DR. ABRAHAM B. SCHWARZ.

THE HOME FOR DESTITUTE CRIPPLED CHILDREN, situated about one-half mile from the College, has about 600 beds, an out-patient department, and a convalescent home at Engleton, about forty minutes' ride from the city. Under the contract recently entered into between the directors of the Home and the trustees of Rush Medical College, this clinical material is made available to the Faculty and students of the College for instruction and research. It affords excellent opportunities in Orthopedic Surgery.

STAFF OF THE HOME FOR DESTITUTE CRIPPLED CHILDREN

DR. JOHN PORTER, President.

CONSULTING STAFF

JAMES B. HERRICK, Department of Medicine.

ARTHUR DEAN BEVAN, Department of Surgery.

JOHN M. DODSON, Department of Pediatrics.

THOR ROTHSTEIN, Department of Neurology.

WILLIAM H. WILDER, Department of Ophthalmology.

E. FLETCHER INGALS, Department of Nose and Throat.

LUDVIG HEKTOEN, Department of Pathology.

OLIVER S. ORMSBY, Department of Dermatology.

ATTENDING STAFF

E. W. RYERSON, J. L. PORTER, WALLACE BLANCHARD, and CHARLES A. PARKER,
Orthopedic Surgeons.
S. R. SLAYMAKER, Department of Medicine.
C. G. GRULEE, Department of Pediatrics.
PETER BASSOE, Department of Neurology.
JOHN B. ELLIS, Department of Ophthalmology.
J. E. RHODES, Department of Nose and Throat.
GEORGE E. SHAMBAUGH, Department of Orology.
E. L. McEWEN, Department of Dermatology.
DEAN D. LEWIS and CARL B. DAVIS, Department of General Surgery.
HUGO AD OLDENBORG, Department of Kinesitherapy.
FREDERICK BROWN MOOREHEAD, Department of Oral Surgery.

ASSOCIATE ATTENDING STAFF

CHARLES M. JACOBS, Associate Orthopedic Surgeon.

ASSISTANT ATTENDING STAFF

THOMAS P. LYNAM and PAUL B. MAGNUSON, Department of Orthopedic Surgery.
WILLARD WOODARD DICKER, Department of Medicine.
LORETTA MAHER, Department of Pediatrics.
DALLAS B. PHEMISTER, Department of General Surgery.
EDWIN MCGINNIS, Department of Nose and Throat.

ATTENDING PHYSICIAN TO THE CONVALESCENT HOME

DR. RICHARD B. OLSEN

THE ANNA W. DURAND HOSPITAL FOR CONTAGIOUS DISEASES

IN THE COOK COUNTY HOSPITAL, which is situated opposite the College, are treated about 20,000 patients annually. In this institution are given about forty clinics a week, including all varieties of medical and surgical cases. The facilities for the study of Pathology which are offered at the Cook County Hospital are unexcelled in this country. Between 300 and 400 postmortems are made annually in the necropsy theater by Associate Professor LeCount, Assistant Professor Wells, and the other pathologists of the hospital.

Clinical courses in the Cook County Hospital are offered to the students of Rush Medical College by the following members of the Faculty:

Attending Physicians: DRs. SAMUEL R. SLAYMAKER, JOS. L. MILLER, JOS. A. CAPPS, THEODORE TIEKEN, MOSES M. PORTIS, LUDWIG M. LOEB, ERNEST E. IRONS, WILBER E. POST, WALTER HAMBURGER, LEON BLOCH, ELLIS K. KERR, ROGER T. VAUGHAN, ARCHIBALD HOYNE.

Attending Neurologist: DR. GEORGE W. HALL.

Attending Pediatricist: DRs. CLIFFORD G. GRULEE, MAY MICHAEL, AUGUST STRAUCH.

Attending Surgeons: DRs. CHARLES A. PARKER, A. BELCHAM KEYES, PAUL OLIVER.

Associate Attending Obstetrician: DR. GEORGE W. LEE.

Associate Attending Gynecologist: DR. CAREY CULBERTSON.

Attending Laryngologist: DR. STANTON A. FRIEDBERG.

Attending Ophthalmologists: DRs. E. V. L. BROWN, CHARLES G. DARLING.

Attending Pathologists: DRs. E. R. LECOUNT, H. G. WELLS.

Extra-mural courses.—Through the courtesy of the medical attendants and managing officers of several hospitals and dispensaries within convenient distance of the College, *extra-mural* clinical courses are offered to the students of Rush, in small groups, and the clinical material available for teaching has thus been greatly augmented. Such courses are offered at the West Side Hebrew Dispensary, treating over 30,000 cases annually; at St. Luke's Hospital, with about 2,000 cases annually; at the Illinois Charitable Eye and Ear Infirmary, treating about 1,000 cases; at the Chicago Isolation Hospital; and at St. Anthony's Hospital, with about 100 beds.

FELLOWSHIPS, HOSPITAL INTERNES, AND PRIZES

(*Rush Medical College*)

FELLOWSHIPS

The following fellowships have been provided in the several departments:

1. The Fellowship in Chemistry. Not to be awarded for 1915-16.
2. The Fellowship in Pathology. Awarded to DR. KAETHE DEWEY.
3. The "Dane Billings Fellowship in Medicine." Awarded to DR. FREDERICK WILLIAM GAARDE.
4. The "Daniel R. Brower Fellowship," founded by the late Professor Daniel Roberts Brower, in the Department of Medicine. Not awarded for 1915-16.
5. The "Nicholas Senn Fellowship in Surgery," founded by the late Professor Nicholas Senn. Awarded to DR. BENJAMIN F. DAVIS.
6. The "A. D. Thompson-Bevan Fellowship in Surgery," established in 1915 through the generosity of Mr. A. D. Thompson, Duluth, Minn., and Professor Arthur Dean Bevan. Awarded to DR. GATEWOOD.

HOSPITAL INTERNES

Positions as internes, through a competitive examination held by the respective hospital staffs, are open each spring to graduates of Rush Medical College in the following Chicago hospitals: Presbyterian, Children's Memorial, Home for Destitute Crippled Children, Cook County, Michael Reese, St. Joseph's, St. Elizabeth's, St. Luke's, Augustana, Chicago, Alexian Brothers', Passavant, Chicago Policlinic, German, Norwegian, Illinois Charitable Eye and Ear Infirmary, Baptist, St. Anthony's, Swedish, Chicago Maternity, Bridewell, Columbus, United States Marine, Washington Park, and others, and in a much larger list of institutions outside of the city of Chicago which make appointments from the roll of qualified students of the Senior class in Rush Medical College. The occupants of these positions receive their board and lodging and acquire experience in every department of practical Medicine and Surgery.

For several years past every graduate who was able and willing to accept an internship has secured such, and it has been impossible to fill a number of vacancies in desirable hospitals.

PRIZES

The Benjamin Rush Prize.—A medal of the value of \$50 is given by the Faculty at each commencement to that member of the graduating class who passes the highest examination in every department of Medicine represented that year in the examination for the degree.

The Daniel Brainard Prize.—A medal is annually given by the Faculty to the student who makes and presents to the College Museum the best accepted dissection in Surgical Anatomy.

The Freer Prizes.—These prizes are derived from the income of a fund presented to the College by the late Nathan M. Freer, of the Board of Trustees, as a memorial to the names of two honored members of his family long identified with the highest interests of this institution.

The J. W. FREER Medal and the sum of \$50 are awarded as a first prize to that member of the Junior or Senior class who presents the best thesis involving original investigation on the part of the student. A second prize of \$25 is awarded to the next successful competitor. The first prize was awarded in 1915 to Ludwig A. Enege for his thesis entitled, "The Thyroid of the Guinea Pig in Experimental Diphthero-Toxemia." The second prize was awarded to Harry Ginsburg for his thesis entitled, "The Onset of Hunger in Infants after Feeding." The theses must be submitted to the Dean of Students on or before April 1, 1916.

The L. C. P. FREER Medal and the sum of \$50 are offered as a first prize to that member of the Freshman or Sophomore class who presents the best thesis involving original investigation on the part of the student. A second prize of \$25 will be awarded to the next most successful of the competitors. *This prize will be competed for by students in the medical courses of the University.* The theses must be placed in the hands of the Dean of Students by April 1, 1916.

Medical scholarships as prizes for research.—The Trustees of the College have established three scholarships in the Junior and Senior years as prizes for the best theses involving original work in any of the branches usually included in the first two years of the medical curriculum: anatomy, both gross and microscopic, embryology, neurology, physiology, physiological chemistry, pharmacology, bacteriology, or pathology. This competition is open to students completing the second year of the medical course in university medical schools whose standards are equal to those of Rush Medical College. The first prize scholarship is the tuition for three quarters in Rush Medical College (\$180), the second prize, tuition for two quarters (\$120), and the third prize, tuition for one quarter (\$60).

Theses must be sent to the Dean of Medical Students, Rush Medical College, on or before April 1, 1916.

The Edward L. Holmes Prize.—In honor of the late Edward L. Holmes, for many years professor of diseases of the eye and ear in Rush Medical College and for several years its president, who during his long career rendered distinguished services to the institution, the Trustees have established the Edward L. Holmes Prize, for original research, to consist of a table and scholarship for one season at the Marine Biological Laboratory at Woods Hole, Mass. This prize is offered in recognition of the great service which is rendered to the medical sciences by research work in biology. The prize will not be offered for 1915-16.

The Henry M. Lyman Prize.—In memory of Henry M. Lyman, who for many years devoted much of his best energies and his unusual ability to the upbuilding of Rush Medical College and who served successively as Professor of Physiology and Neurology and Professor of Medicine, and who was later Dean of the Faculty, a fund has been created by his children, the proceeds of which, amounting to \$25 a year, will be offered as a prize to the member of the Junior or Senior class who shall present the best thesis on a topic connected with internal medicine. This thesis must include the results of original laboratory or ward work or of personal clinical observation. Before the work is undertaken by the student the Head of the Department of Medicine should be consulted as to the choice of subject and other details.

The Howard T. Ricketts Prize.—In memory of Dr. Howard Taylor Ricketts, at one time a member of the Department of Dermatology, who died of typhus fever, while investigating that disease, in the City of Mexico, May 3, 1910, this Department has established a prize in Dermatology. This prize, of the value of \$25, will be awarded annually to the student presenting the best thesis embodying the results of original investigation on some topic related to Dermatology.

SCHOLARSHIPS AND OTHER AID

(At the University of Chicago)

A. HONOR SCHOLARSHIPS

To entering students.—To a limited number of students of high rank from co-operating and affiliated high schools an honor scholarship (\$120 in tuition fees) is granted each year. Holders of honor scholarships are not required to render service to the University. These scholarships may be revoked at the end of any quarter, if the holder's work is not maintained at a satisfactory grade.

To the winner of a competitive examination to be held at the University Friday, April 14, 1915, in each of the following subjects (the University reserves the right to withdraw any examination if fewer than fifteen candidates present themselves): English, Mathematics, Latin, German, French, Physics, Chemistry, Botany, American History, and Public Speaking, a prize scholarship (\$120 in tuition fees) will be issued for the next academic year.

Second-year honor scholarships.—To twenty Junior College students who have shown exceptional ability in the work of the first year, honor scholarships, one of which is called the "Lillian Gertrude Selz Scholarship" and grants full annual tuition fees and \$80 in cash to the young woman who completes the first year with highest standing, are granted for the second year (three quarters) of the undergraduate course.

Senior College honor scholarships.—To twelve Senior College students nominated by the departments for excellent work in the Junior College courses, honor scholarships are granted to cover the tuition fees of the third year.

Graduate honor scholarships.—Twenty scholarships are assigned to students who have completed with honor the work of a Senior College. Each department of the University, with the approval of the committee on Scholarships, has the privilege of naming a student who is for that year the honor student of the Senior Colleges in that department, and to this student there is given a graduate scholarship yielding in each case a sum equal to the University fees for three quarters,

provided the student continues his studies in the Graduate Schools. The assignments are made in the Spring Quarter, and in no case does a scholarship continue beyond the end of the Spring Quarter next following the date of assignment.

A limited number of graduate scholarships yielding a part or all of tuition fees for three quarters are available for graduate students of attainment and promise. Holders of these scholarships are not required to render service to the University. These scholarships may be revoked at the end of any quarter, if the holder's work is not maintained at a satisfactory grade.

Undergraduate.—A limited number of scholarships yielding a part or all of tuition fees for three quarters are available for undergraduate students of attainment and promise. Holders of these scholarships are not required to render service to the University. These scholarships may be revoked at the end of any quarter, if the holder's work is not maintained at a satisfactory grade.

The following specially endowed honor scholarships are also available for undergraduate students:

"The Kelly Scholarship," which yields the annual tuition fees (\$120).

"The Walter D. Löwy Scholarship," which yields full annual fees (\$120) and is granted to a student of high scholarship, preferably to a person of the Jewish faith.

"The Henry C. Lytton Scholarship," which yields the annual tuition fees (\$120).

"The Marie J. Mergler Scholarship," which yields annual fees (\$120) to a young woman student specializing in Physiology.

"Joseph Reynolds Scholarships," which yield \$1,455 per year, available in tuition fees for twelve men.

"The Scammon Scholarship," which yields \$20 toward the tuition fees of a Chicago student.

"Charles H. Smiley Scholarship," which yields full annual fees (\$120) and is granted to a student of high scholarship, preferably to a colored student.

"Peter Tilton Scholarship," which yields \$50 in tuition fees.

"The University Scholarship," which gives full annual fees (\$120) to a student of high scholarship specializing in Semitics.

"The Katherine M. White Scholarships," which yield \$360 annual fees for three students of high scholarship.

B. COMPETITIVE AND PERSONALLY BESTOWED SCHOLARSHIPS

Certain scholarships are bestowed either by examination or by personal appointment as follows:

"The Enos M. Barton Scholarship," endowed by Mr. Enos M. Barton, of Chicago, provides for the tuition fees of a student for three quarters (\$120). It is awarded annually to an undergraduate student whose scholarship in preparatory work and in college shall reach "B," and who shall maintain this standing subject to forfeiture. Appointments made by Mr. Barton.

"The Permelia Brown Scholarship," about \$1,250 provided for under the will of Permelia Brown, offers aid to unmarried American-born women students, residents of Chicago, Cook County, Illinois. Application should be made to the Dean of the Faculties.

"The Colby Scholarships," which yield full annual tuition fees for five graduates of Wayland Academy.

"The Zwinglius Grover Memorial Scholarship," endowed by the Alumnae Association of Dearborn Seminary, yields annual fees (\$120) for a woman student.

"The David Blair McLaughlin Prize." This prize of approximately \$50, the annual net income of \$1,000, established in memory of David Blair McLaughlin, 1895-1914, a student in the College of Literature of the Class of 1916, is awarded annually to a student having credit for not more than two years of college work, who has shown special skill and sense of form in the writing of English prose.

"The Pillsbury Academy Scholarship," which yields \$52 annually toward the fees of a graduate of Pillsbury Academy.

"The Elbert H. Shirk Scholarship," available for students nominated by the Shirk Estate, Peru, Ind., yields the annual tuition fees of \$120.

The "Henry Strong Scholarships," provided for under the will of General Henry Strong, offer aid to students possessing not only zeal for scholarship but also character, and those traits tending to leadership. Four scholarships, yielding in the aggregate one thousand dollars, will be assigned annually. Application should be made to the President before August 1.

"The Talcott Scholarships," endowed by Mrs. William A. Talcott of Rockford, Ill., provide tuition fees to the amount of \$480 per year. This fund is reserved for graduate students, preferably graduates of Rockford College.

Five "Public Speaking Scholarships" of the total value of \$200 in tuition fees are granted to the winners in the quarterly Public Speaking Contests in the Junior Colleges.

A prize of \$100 founded in memory of Mrs. Florence James Adams is offered to students for excellence in artistic reading. The competition occurs in June.

"The Political Science Scholarship" yields \$200 annually and is awarded to an undergraduate who has been in residence two quarters, who has no more than nine majors, who has an average grade of C, and who in the first week of the Spring Quarter passes the best examination on the subject of "Civil Government of the United States." No award is made unless the examination mark is at least 80 per cent.

"Oratorical Contest Scholarships" are granted to Senior College students annually as follows: the first prize, \$120 in fees; the second, \$80 in fees; the third, \$40 in fees.

Three scholarships of the value of \$40 each are awarded to the members of the college teams winning the Junior College contest in debate.

"Julius Rosenwald Oratorical Prizes" are granted to Senior College students annually as follows: \$100 cash to speaker ranking first; \$50 cash to speaker ranking second.

"The University Debate Scholarships" provide for the awarding of \$480 in tuition fees to those successful in securing positions on the debating teams of the University.

N.B.—*These prize scholarships may not be applied on deferred tuition bills or on notes.*

Medical scholarships as prizes for research.—In order to encourage the investigative spirit and method among prospective medical students in the list of colleges recognized by the University of Chicago, the University offers three or four prize scholarships in the Medical Courses for the best theses involving original work in one of the sciences fundamental to medicine: physics, chemistry, or any of the biological branches. Two or three of these are open to undergraduates only, as follows: The first prize scholarship, a sum equal to the tuition for three quarters (\$180); the second scholarship, a sum equal to the tuition for two quarters (\$120); and the third scholarship, a sum equal to the tuition for one quarter (\$60). Students submitting theses in this group must be members of the Senior class of the college which they are attending and must secure the Bachelor's degree from said college and be eligible to enter the Graduate School of the University of Chicago in order to claim the scholarship won.

One prize scholarship, yielding a sum equal to the tuition for three quarters (\$180), for a thesis similar to the above is open only to graduate students in these colleges.

The competition for these prize scholarships in medicine is open only to students in colleges which are in the recognized list of the University of Chicago.

Theses must be in the hands of the Dean of Medical Students, University of Chicago, on or before April 1, 1916. Further particulars in regard to these scholarships may be had on application to the Dean.

The first prize was awarded in 1914-15 to Leon C. Bosch, of Hope College, for his thesis entitled "An Investigation of the Typhoid Fever Epidemic in Relation to the Milk Supply of Holland, Michigan."

PRIZE FOR RESEARCH

The Howard Taylor Ricketts Prize, endowed by Mrs. Howard T. Ricketts, of Kirkwood, Ill., amounting to approximately \$200, is awarded each year on the third of May as a memorial to Professor Ricketts. It is awarded by a committee of the Department of Pathology to a student presenting on or before April 15 the best piece of research work in that Department during the preceding year. This prize was awarded in 1914-15 to Maude Slye, for her thesis on "The Influence of Inheritance on the Spontaneous Cancer Formation in Mice."

OTHER FORMS OF AID

Service scholarships.—A limited number of scholarships which require their holders to render service (usually two hours daily in one of the libraries) are granted to students of good scholarship who need financial aid.

C. UNIVERSITY SERVICE

DEPARTMENTAL SERVICE

a) Graduate.—A limited number of assignments to service, yielding a part or all of the tuition fees for three quarters, are available for graduate students of attainment and promise. This service is usually rendered in the department in which the student is doing the major part of his work. Students in departmental service pay their tuition fees in cash at the beginning of each quarter. At the close of the quarter they receive a cash payment for the amount of the service, if it has been satisfactorily rendered.

Assignments of this class are awarded preferably to students who desire to work in a special department rather than to those who desire to pursue general courses. Application should be made to the Deans of the Graduate Schools.

b) *Undergraduate*.—On recommendation of departments twelve assignments to departmental service are made to students in the Senior Colleges. Such students render ten hours' service a week in the departments by which they have been recommended. Application should be made to the Dean of the College of Science and to the Dean of the College of Commerce and Administration.

CHOIR AND BAND SERVICE

Another means of assistance to students consists of service in the University Choir and the University Band. Inquiries concerning such service may be addressed to the Director of the University Choir and the Director of the University Band, care of the University of Chicago.

GENERAL UNIVERSITY SERVICE

Another means of assistance to students consists of General University Service. Students who receive assignment for such service are employed a limited number of hours as messengers, telephone attendants, clerks in the various offices of the University, typists and stenographers, and piano players in the gymnasium.

D. OUTSIDE EMPLOYMENT

The University maintains an Employment Bureau through which many kinds of work are found for students who are compelled to depend in whole or in part upon their own resources.

E. THE STUDENTS' FUND SOCIETY

From a fund created by friends of the University, loans are made to many students of worth and promise who need temporary aid. This fund is limited and is usually exhausted early in the academic year.

A *special circular* entitled *Assistance to Students* will be sent on request. It gives details concerning all the forms of aid, routine of application, etc.

FELLOWSHIPS

(*At the University of Chicago*)

1. *The University Fellowships*.—The University appropriates annually the amount of twenty-one thousand five hundred dollars (\$21,500) for Fellowships in the Graduate Schools and \$2,700 in the Divinity School. These Fellowships are awarded by the Trustees, upon the recommendation of the President and the nomination of particular departments, to graduate students who desire to pursue advanced work in some special line. About seventy Fellowships, ranging in individual value from \$120, or tuition fees for three quarters, to \$520, are assigned each year.

The University asks of its Fellows a modicum of service, consisting of work (a) as an instructor; (b) as an assistant in reading examination papers; (c) as an assistant on a University journal; or (d) as an assistant in one of the departmental laboratories, museums, or libraries. In no case is a Fellow expected to devote so much time to the work here indicated as to interfere seriously with his own study.

Each Fellow makes a written report to the Dean at the beginning of each quarter. This report outlines his work as a student, and the work assigned to him as an officer of the University for the current quarter, and is indorsed by the Head of the Department. The report blanks may be procured at the Information Office.

2. *Applications for Fellowships.*—Applications for Fellowships should be addressed to the Deans of the Graduate Schools of the University, and should be in their hands on or before March 1.

3. *Appointments to Fellowships.*—

a) *Date.*—The annual assignment of Fellowships is made early in April. A Fellowship is available for any three of the four quarters, beginning with the Summer Quarter, following the date of appointment.

b) *Attainments required.*—The candidate must have attained proficiency in some department. In general, he should have spent at least one year in resident study after receiving his Bachelor's degree. In making the appointment, special weight is given to theses indicating the candidate's ability to conduct original investigation.

4. *Special Fellowships.*—In addition to the regular University Fellowships mentioned above, there are special Fellowships offered by individuals. These vary somewhat in number and amount from year to year. At present they are as follows:

a) *The Bucknell Fellowship*, yielding \$400, offered by Mr. Charles Miller, of Franklin, Pa., is open to graduates of Bucknell University. The appointment to this Fellowship is made by the faculty of Bucknell University.

b) *The Joseph B. Loewenthal Fellowship in Chemistry*, endowed by Mr. Berthold Loewenthal, of Chicago, as a memorial of his son, Joseph B. Loewenthal. It yields about \$400 to the incumbent annually appointed, and is awarded on the nomination of the Department of Chemistry and the recommendation of the President of the University.

c) *The Gustavus F. Swift Fellowship in Chemistry*, endowed by Mrs. Gustavus F. Swift, Chicago, as a memorial of her husband, Gustavus F. Swift. It yields about \$520 to the incumbent annually appointed, and is awarded for especial ability in research on the nomination of the Department of Chemistry and the recommendation of the President of the University.

MEDICAL SOCIETIES

The fact that a very large number of medical men practice in Chicago has led to the development of a number of medical societies, general and special. Among the more interesting to medical students in the early years of their course is the Chicago Pathological Society. A large number of clinical societies, notably the Chicago Medical Society and its various branches, will interest the student, particularly in the later years of his course.

The University of Chicago Biological Club meets on the second Tuesday evening of each month at 7:45 sharp. At the meetings of this society the advanced work and original research of the various laboratories will be reported, and topics of general medical and scientific interest will be discussed. The meetings are open to medical students. The Society holds no meetings during the Summer Quarter.

ALUMNI ASSOCIATION

The Alumni Association of Rush Medical College holds yearly meetings. These meetings precede the regular commencement of the College, which will occur on June 14, 1916. All graduates of the College in good standing are eligible to membership, which can be obtained by the payment of one dollar, the annual dues. The officers for the year ending July 1, 1915, are as follows:

OFFICERS

PRESIDENT—Arthur M. Corwin, '90, Chicago
 FIRST VICE-PRESIDENT—Daniel Hampton Bowen, '76, Waukon, Ia.
 SECOND VICE-PRESIDENT—Charles J. Lewis, '65, Chicago
 THIRD VICE-PRESIDENT—JOHN R. McDILL, '85, Milwaukee, Wis.
 NECROLOGIST—John J. Stoll, '85, Chicago
 TREASURER—Elmer L. Kenyon, '96, 104 South Michigan Boulevard, Chicago
 SECRETARY—Charles A. Parker, '81, 7 West Madison Street, Chicago

EXECUTIVE COMMITTEE

John Ritter, '80, Chicago	B. M. Linnell, '93, Chicago
Elmer L. Kenyon, '96, Chicago	Oliver S. Ormsby, '95, Chicago
Frank Cary, '82, Chicago	R. L. Leonard, '72, Chicago
J. J. Stoll, '85, Chicago	A. M. Corwin, '90, Chicago
Harvey Tyler, '89, Chicago	Charles A. Parker, '91, Chicago

FELLOWSHIP COMMITTEE

Geo. H. Weaver, '89, <i>Chairman</i> , 1628 Washington Blvd., Chicago	
Geo. D. Swaine, '73, Cleveland, Ohio	E. C. Hamley, '02, Sprague, Wash.
J. S. Kauffman, '75, Blue Island, Ill.	Geo. W. Baker, '94, Ogden, Utah
Winfield Ackley, '80, Juniata, Neb.	W. A. Foskett, '97, Whitebird, Idaho
L. L. Uhls, '84, Osawatomie, Kan.	R. E. Farr, '00, Minneapolis, Minn.
Adolph Moeller, '87, Milwaukee	P. A. Reppert, '03, Burlington, Ia.
A. I. Bouffleur, '87, Chicago	R. C. Robe, '95, Pueblo, Colo.
Oliver C. Neier, '90, Indianapolis	

ALUMNI RELATIONS COMMITTEE

John Ritter, '80, *Chairman*, Chicago

Cassius T. Lesan, '97, Mount Ayr, Ia.	Jehiel W. Chamberlin, '82, St. Paul, Minn.
Byron M. Caples, '91, Waukesha, Wis.	
Fred A. Tucker, '97, Noblesville, Ind.	Oliver H. Avey, '01, Payette, Idaho
Robert C. Robe, '95, Pueblo, Colo.	(Tri-State Oregon, Washington and Idaho)
Harry W. Horn, '98, Wichita, Kan.	

The dues should be sent to the Secretary of the Association, Dr. Charles A. Parker, 7 West Madison Street, Chicago.

The Association publishes a small bulletin four times a year. This for the present will be sent to members without extra charge. The Association also supports a Fellow doing research work in residence at the College. Contributions to this fund are solicited.

Alumni are requested to inform the College Registrar, James H. Harper, Rush Medical College, Chicago, of any change of address. They will also confer a favor by sending him a copy of any address, program, or other document, relating to the early history of the College.

GRADUATES FOR THE SESSION OF 1914-15

The degree of Doctor of Medicine was conferred on the following students at the close of the Spring Quarter, June 10, 1914:

Charles Melville Bacon	Charles Samuel Kibler
Milford Edwin Barnes	Gerard Nicholas Krost
Edgar William Bedford	Charles Kubik
Arthur George Beyer	Gleason Chandler Lake
Christian C. Birkelo	Gustav W. Lawson
Robert Linde Bowen	Earle Albert Linger
Harold Linhoff Brereton	Victor Fawcett Long
John Harlan Bridenbaugh	Robert Henry Lowry, Jr.
William Frederick Brinkman	Christian Bateman Luginbuhl
Robert Osgood Brown	Frank Benedict Lusk
Emil Bunta	Clarence Edward Lynn
Lowell Mason Campbell	Alexander Campbell Macdonald
Leland F. Carlton	Warren Mahlon Miller
J. Albert Chenoweth	Mary Sara Mitchell
Roy Eugene Christie	Peter Alexander Nestos
Constant Moreaux Colignon	John Weston Nuzum
Earl Crafts	Odd V. Opheim
James Larkin Craig	William O. Ott
Hayes Hunter Culbertson	Kenneth L. Partlow
Louis Thomas Curry	Clinton Virgil Reed
Irwin Grant Davis	Erich Wilhelm Schwartze
Orville Logan Edwards	William Barnard Sharp
Lawrence Frederick Fisher	Fred M. Smith
Edson Almeron Freeman	Walter Henry Stephan
Forest Henry Frey	Forrest C. Swearingen
Carl Orwig Getty	Ottar Arnjlot Thomle
William McMicken Hanchett	Warren Yoder Thompson
Frank Walter Hannum	David Thomson
Carl Francis Harris	Emmett Calvin Troxell
Frederick Morton Harris	Earle Raymond Van Cott
J. Roscoe Harry	Clifford Ray Watkin
Richard Fleetwood Herndon	Anders John Weigen
Arthur Handley Hixson	Clifford Webb Wells
Carl A. Hjelle	Sumner Merrill Wells
William Sullivan Horn	Russell Owen Wharton
Russell Martin Johnson	Arthur Joseph Williams
Charles Moman Jonston, Jr.	Earle DeWitt Wise

The degree of Doctor of Medicine was conferred on the following students at the close of the Summer Quarter, August 28, 1914:

Harold Crawford Hill, S.B.	HOSPITAL INTERNESHIP SECURED Laboratory, Chicago Health Department
Richard Newton Jones	Rood Hospital, Hibbing, Minn.
Harry William Priem, S.B.	Department of Anatomy, University of Utah
Perry Gardner Snow, A.B.	Home for Destitute Crippled Children
Herman Campbell Stevens, Ph.D.	City and County Hospital, St. Louis, Mo.
Ernest Gustav N. Tillmanns	City and County Hospital, St. Louis, Mo.
Lynn Brian Vaughan, A.B.	City and County Hospital, St. Louis, Mo.

At the close of the Autumn Quarter, December 22, 1914:

Eldridge Stevens Adams, A.B.	Denver, Colo., City and County Hospital
Elven James Berkheiser, A.B.	Presbyterian Hospital
Gilbert Elliott Breerton, S.B.	City and County Hospital, St. Paul, Minn.
Julian Faville DuBois, S.B.	St. Joseph's Hospital
Devilla David Edmonds	Chicago Lying-in Hospital
Cassie Belle Rose, S.B.	St. Anthony's Hospital
Charles Everett Smeltzer, S.B.	Instructor, University of Pittsburgh
Arthur Lawrie Tatum, S.B.	Chicago Lying-in Hospital
Henderina Van de Erve	

At the close of the Winter Quarter, March 19, 1915:

Theodore Ernest Beyer, A.B.	Washington Boulevard Hospital
Homer M. Carter, A.B.	Children's Memorial Hospital
John Paul Ham, S.B.	Wesley Hospital
Carl N. Harris, A.B.	City and County Hospital, St. Paul, Minn.
James Sidney Orr, S.B.	St. Louis Hospital, LaCrosse, Wis.
Marion Pierce, S.B.	Presbyterian Hospital
Melbourne Jabez Pond, A.B.	Presbyterian Hospital
Burrell Otto Raulston, A.B.	Alexian Brothers' Hospital
Carrie Estella Slaght, Ph.B.	St. Mark's Hospital, Salt Lake City, Utah
William Harold Stutsman, S.B.	Milwaukee Sanitarium, Wauwatosa, Wis.
Michael Joseph Sullivan, S.B.	Alexian Brothers' Hospital
William Leonard Sutherland, A.B.	Cincinnati General Hospital, Cincinnati, Ohio
William Allan Swim, S.B.	
John William Thornton, A.B.	
Paul F. Thuresson, A.B.	

* The following students will receive the degree at the close of the Spring Quarter, June 16, 1915:

Eerko Samuel Aeilts, A.B.	Edmund Jacobson, S.B., Ph.D.
Edmund Andrews, A.B.	Peter Oscar Conrad Johnson, A.B.
Paul Black, S.B.	William Solomon Jones, A.B.
Andrew Morton Carr, A.B.	Arthur Louis Langhorst, S.B.
Warren Oscar Christenson, A.B.	Eugene Thomas Leonard, A.B.
Carl Wesley Clark, A.B.	Karl Lewis, S.B.
Robert Carl Cook, S.B.	George McCreight, S.B.
Lyman Alden Copps, S.B.	Liva Charles McLain, S.B.
Thomas Joseph Deveraux	Fred Henry Maurer, S.B.
Ludwig Augustus Emge, S.B.	Harry Bugge Moe, S.B.
Ersel Mial Fessenden, A.B.	Clark Culbertson Piper, A.B.
Carl Freund, S.B.	George LeRoy Rees, S.B.
Elmer Funkhouser, A.B.	George Hiram Robbins, S.B.
Harry Gauss, S.B.	Clarence Wilbur Robertson, A.E.
Cyril John Glaspel, A.B.	Gerald Clarence Roskilly, S.B.
Robert Raymond Glynn, S.B.	Emil Albert Ruka, S.B.
Ralph Wilbur Hardinger, A.B.	Francis Joseph Scully, A.B.
Faith Frances Hardy, A.B.	Carl Foster Snapp, A.B.
Albert Ingvald Haugen, S.B.	William Harold Stutsman, S.B.
Fred Z. Havens, A.B.	George Thomas Twyman, A.B.
Robert Houston Henderson, S.B.	Leon Unger, S.B.
Russell Dorr Herrold, S.B.	Richard Eugene Werlich, S.B.

* Candidates for the degree at the close of the Spring Quarter, June 16, 1915:

Thomas Dyer Allen, A.B.	Robert Stanley Kneeshaw, A.B.
Clifford Ashby, A.B.	John Bruce MacLaren
Hillier Locke Baker, S.B.	Frank Benjamin Marek, S.B.
Frederic Nikolas Bjerken, A.B.	Frank Raymond Menne, S.B.
Oval Bevolv Bolibaugh	Elmer Leonard Mertz, A.B.
Lang Fulton Bowman, A.B.	Lee Monroe Miles, S.B.
Miles John Breuer, A.B.	Lurine Miles, A.B.
Ruth Stewart Buis, A.B.	James Gordon Montgomery, S.B.
Vinton John Clark, A.B.	Francis George Murphy, S.B.
Laurence Glen Dunlap, S.B.	Paul James Preston
Edward Orlando Ellison, A.B.	Benjamin Rappaport, S.B.
Eugene Fernandez, S.B.	Walter Herman Rietz, S.B.
Wesley Emmet Gatewood, A.B., A.M.	William Robison, S.B.
Milton Peter Graham, A.B.	William David Sansum, S.B.
Edwin Frederick Hirsch, S.B., Ph.D.	Warren Preston Sights, S.B.
Lewis Andrew Hopkins, S.B.	Lowell Delford Snorf, S.B.
James Edward Hunter	Charles Alexander Thomson, A.B.
	Edward Walter Westland, S.B.

* Internships have not been selected by these students at the time of publication of this Circular. The list will be published in the next number of the *Alumni Bulletin* and in the Circular for next year.

MATRICULATES FOR THE SESSION OF 1914-15

The following list includes only those students who were in attendance during one or more quarters, and who were entitled to take the quarterly examinations.

NOTE.—The naming of a degree not followed by the name of an institution in parentheses is understood to mean a degree conferred at the University of Chicago.

Where no institution is named, it is understood to mean that the student began his career as a Junior at the University of Chicago.

Where no state is mentioned, Illinois is understood.

ABBREVIATIONS.—U. = University; C. = College; S. = School; Hs. = High School; A. = Academy; Sm. = Seminary; Inst. = Institute (or Institution).

PERIOD OF RESIDENCE.—*s* = Resident during Summer Quarter, 1914; *a* = Resident during Autumn Quarter, 1914; *w* = Resident during Winter Quarter, 1915; *sp* = Resident during Spring Quarter, 1915.

FRESHMEN AND SOPHOMORES

- Abraham, Edwin Dorsey, *s, a, w, sp*, Clifton, Ariz. Senior C.
 Acker, Wesley H., *s, a, w, sp*, Manitou, Colo. Colorado C.
 Adams, Clarence Walter, *s*, Olney. Kansas U.
 Aiken, Ralph Charles, *a, w, sp*, Chicago. Senior C.
 Arnold, James Eddy, *a, w, sp*, Miles City, Mont. Senior C.
 Arnold, Merton O., *s*, Palmer, Neb. U. of Nebraska.
 Ashley, Clifford, *s*, Chicago. A.B. (U. of Utah) '10.
 Bailey, Percival, *s, a, w, sp*, Carbondale. S.B. '14.
 Balcar, Joseph, *a, w, sp*, Chicago. S.B. (Coe C.) '13.
 Barbour, Orville E., *a, w, sp*, Peoria. Bradley Polytechnic Inst.
 Bean, Harold C., *s*, Portland, Ore. A.B. (U. of Oregon) '12.
 Beard, Halard, *a, w, sp*, Chicago. Senior C.
 Billik, Cyril D., *s*, Volyn, Russia. Ph.B. '13.
 Bjerken, Frederik Nikolas, *a*, Kindred, N.D. A.B. (U. of North Dakota) '13.
 Bothman, Louis, *a, w, sp*, Murphysboro. Senior C.
 Braafladt, Louis, *s*, Belview, Minn. A.B. (Luther C.) '06.
 Bradfield, Helen C., *a, w, sp*, Grand Rapids, Mich. A.B. (Vassar C.) '06.
 Bristow, Arthur S., *a, w, sp*, Princeton, Mo. U. of Missouri.
 Brown, Mary Wilmarth, *a, w, sp*, Chicago. A.B. (Bryn Mawr) '13.
 Brunemeier, Edward Herman, *s*, Hubbard, Ia. S.B. '13.
 Bryan, William Scott, *a*, Chicago. Junior C.
 Buis, Albertus H., *a, w, sp*, Hickman, Neb. University of Nebraska.
 Bull, Leland L., *a, w, sp*, Ellensburg, Wash. Senior C.
 Bureky, Fred W., *s, a, w, sp*, Chicago. Senior C.
 Butler, Craig D., *a, w, sp*, Aledo. S.B. (Earlham C.) '14.
 Butler, William J., *a, w, sp*, Chicago. S.B. '14.
 Caldwell, George T., *s, w, sp*, Columbus, Ohio. A.M. (Ohio State U.) '13.
 Callander, Russell John, *a, w, sp*, Delaware, Ohio. Ohio Wesleyan U.
 Cann, LeRoy R., *w, sp*, Chicago. Senior C.
 Carlsson, Edward Samuel, *a, w, sp*, Lindsborg, Kan. A.B. (Bethany C.) '12.
 Carpenter, Fred E., *a*, Reasnor, Ia. Senior C.

- Carrico, Mamie Leola, *s*, Ashmore. S.B. '14.
 Caylor, Harold Delos, *a, w, sp*, Pennville, Ind. Indiana U.
 Cecil, Eugene R., *w, sp*, Chicago. Unclassified.
 Chamberlin, Klee A., *a*, Tonica. Northwestern U.
 Chase, Ralph, *s*, Wynewood, Okla. U. of Oklahoma.
 Chimene, Eugene Opet, *a, w, sp*, Houston, Tex. Senior C.
 Chivers, Joseph Hardy, *s, a, w, sp*, Helena, Mont. Senior C.
 Choisser, Roger M., *a, w, sp*, Menard. Senior C.
 Christensen, Herbert H., *a, w, sp*, Jamestown, Kan. A.B. (Ottawa U.) '14.
 Christofferson, Olof Harry, *a, w, sp*, Puyallup, Wash. U. of Oregon.
 Clarke, William L., *a*, Provo, Utah. Utah Agricultural C.
 Clawson, Benjamin, *s*, Lawrence, Kan. A.M. (U. of Kansas) '11.
 Coffman, Carl Flory, *a, w, sp*, Elkton, Va. A.B. (Northwestern U.) '11.
 Cohen, Joseph Kaiser, *sp*, Chicago. Senior C.
 Cole, Marion O., *a, w, sp*, Elburn. Senior C.
 Cooper, Homer Percival, *a, w, sp*, Chicago. A.B. (Fiske U.) '11.
 Corcoran, R. Bourke, *s*, Chicago. Senior C.
 Crane, Jay J., *a, w, sp*, Hot Springs, S.D. U. of Nebraska.
 Critchlow, Maurice Martin, *a, w, sp*, Salt Lake City, Utah. A.B. (Princeton U.) '13.
 Dart, Raymond O., *s*, Kansas City, Mo. A.B. (U. of Kansas) '14.
 Davies, Raymond Evan, *a, w, sp*, Bement. A.B. (U. of Illinois) '14.
 Davis, Ethel Mildred, *a, w, sp*, Chicago. Senior C.
 Dilley, Harry Horace, *s*, Des Moines, Ia. Drake U.
 Dismond, Henry Binga, *sp*, Chicago. Senior C.
 Doll, Frank Rolla, *a, w, sp*, Lancaster, Wis. Senior C.
 Dollahan, Martin Leland, *a, w, sp*, Lawrenceville. Eastern Illinois State Normal.
 Dragstedt, Carl Albert, *a, w, sp*, Anaconda, Mont. Senior C.
 Dragstedt, Lester Reynold, *a, w, sp*, Anaconda, Mont. S.B. '14.
 DuBois, Charles F., *s*, Grand Forks, N.D. U. of North Dakota.
 Dundon, John Richard, *a, w, sp*, Ishpeming, Mich. Litt. B. (Notre Dame U.) '14.
 Duner, Clarence S., *s, a, w, sp*, Chicago. Senior C.
 Eastlake, Alfred Chesmore, *w, sp*, Kansas City, Mo. Senior C.
 Edson, Henry Scammon, *a, w, sp*, Grinnell, Ia. S.B. (Cornell C.) '13.
 Ekfelt, Odd, *a*, Chicago. A.B. (Luther C.) '10.
 Eklund, William Joakim, *s, a, w*, Duluth, Minn. U. of Minnesota.
 Elder, James Clyde, *s*, Tarkio, Mo. S.B. (Tarkio C.) '05.
 Elliott, Chester H., *s*, Cambridge, Ohio. A.B. (Westminster C.) '09.
 Elliott, James R., *s*, Linn, Kan. U. of Kansas.
 Elliott, Russell D., *s, sp*, Lawrence, Kan. A.B. (U. of Kansas) '14.
 Elsesser, Oscar J., *s, a, w, sp*, Freeport. S.B. '13.
 Fancher, James Kenneth, *a*, Deer Lodge, Mont. U. of Montana.
 Finney, Clarence E. M., *w, sp*, Pittsburgh, Pa. S.B. (Westminster C.) '11.
 Fisher, Charles Edward, *sp*, Macomb. Senior C.
 Fister, George M., *a, w, sp*, Logan, Utah. S.B. (Utah Agricultural C.) '12.
 Flinn, Brainerd Pease, *a, w, sp*, Redwood Falls, Minn. Pomona C.
 Flynn, Michael H., *s, a, w*, Hartford, Wis.
 Foran, Francis Leo, *s, a, w, sp*, Worcester, Mass. A.B. (Holy Cross C.) '13.

- Fuller, Glenn Vincent, *a, w, sp*, Lima, Ohio. Ohio Wesleyan U.
Galvin, George J., *a, w*, Chicago. McMinnville C.
Gerish, Nettie L., *s*, Gypsum, Kan. Emporia Normal School.
Gidley, William Francis, *s*, Holly, Mich. S.B. (U. of Michigan) '08.
Giere, Silas Waldemar, *a, w, sp*, Sacred Heart, Minn. St. Olaf's C.
Gifford, Homer R., *s*, Wapakoneta, Ohio. S.B. (Otterbein U.) '11.
Gifford, Martha J., *s*, Corning, N.Y. Ph.B. (Kalamazoo C.) '10.
Gilchrist, Virgil Martha, *s*, Moscow, Idaho. S.B. (U. of Idaho) '12.
Gilroy, Earl William, *s*, Chicago. U. of Minnesota.
Ginsburg, Harry, *s*, Chicago. S.B. '14.
Gleason, Archie Leland, *a, w, sp*, Glenville, Minn. Senior C.
Goff, W. R., *s*, Spencer, W.Va. U. of West Virginia.
Go-Kee, Francisco, *a, w, sp*, Manila, P.I. Senior C.
Golub, Samuel, *w*, Chicago. S.B. '14.
Grassel, Albert G., *s*, Thompson. S.B. (Blackburn U.) '06.
Gray, George Alexander, *a, w, sp*, Detroit, Mich. Senior C.
Greenspahn, Sydney, *s, a*, Chicago. Senior C.
Grichter, Benjamin B., *s, sp*, Chicago. Senior C.
Groat, James T., *s*, Chicago. Senior C.
Hager, Benjamin Harry, *a, w, sp*, Los Angeles, Cal. Senior C.
Hardinger, Paul Milton, *a, w, sp*, Gays. U. of Illinois.
Hardt, Leo J., *s, a, w, sp*, Chicago. S.B. '14.
Harger, Chalmer Milton, *sp*, Topeka, Kan. U. of Nebraska.
Harrington, Ethel R., *a, w, sp*, Chicago. Ph.B. '12.
Harrington, Kathleen R., *a, w, sp*, Chicago. S.B. '14.
Harris, Carl N., *s*, Wilmot, S.D. A.B. (Wabash C.) '10.
Hart, William Harry, *a, w, sp*, Chicago. Senior C.
Hartwig, Gerhard F., *s*, St. Ansgar, Ia.
Heck, Frank Leroy, *w, sp*, Chicago. A.B. (Wittenberg C.) '14.
Heise, Herman Alfred, *s, a, w, sp*, Milwaukee, Wis. A.B. (U. of Wisconsin) '13.
Henderson, Arthur J., *s*, Lake Mills, Ia.
Henkel, Lowell Lee, *a, w, sp*, Chicago. A.B. (Washburn C.) '12.
Henry, William John, *s, a, w, sp*, Chester, S.C. A.B. (Erskine C.) '12.
Heumann, Johanna, *a, w, sp*, Chicago. Senior C.
Hicks, Clarence J., *a, w, sp*, Chicago. Columbia U.
Higbee, David R., *s*, Omaha, Neb. U. of Omaha.
Hines, Marion, *a, w, sp*, Albion. A.B. (Smith C.) '13.
Holderman, Jacob William, *a, w*, Hutsonville. A.B. (DePauw U.) '09.
Holmblad, Edward C., *a, w, sp*, Aurora. Lake Forest U.
Horrall, Onis Harrison, *s*, Cannelburg, Ind. Indiana State Normal School.
Hough, Wyman G., *sp*, Sibley, Ia. U. of Iowa.
Houston, Frances, *s, a, w, sp*, Kalispell, Mont. S.B. '14.
Huber, Harry Lee, *s, a, w, sp*, Mattoon. S.B. '10.
Hunter, Alice M., *a, w, sp*, Grand Forks, N.D. A.B. (U. of North Dakota) '14.
Hunter, Paul M., *s, a, w, sp*, Chicago. Senior C.
Huntington, Earl D., *s, a, w, sp*, Chicago. Senior C.
Ice, Noel Carlysle, *s*, Gifford. Western Reserve U.
Inlow, William DePrez, *s, a, w, sp*, Manilla, Ind. S.B. '15.

- Ireland, Jay, *s, a, w, sp*, Bridgeport. Senior C.
 Jackson, Clancy M., *s*, Forsyth, Ga. Mercer U.
 Jacobson, Leroy, *a, w, sp*, Elkhorn, Wis. Beloit C.
 Johnson, Everett W., *s*, Columbia, Mo. U. of Missouri.
 Johnson, Henry C., *a, w, sp*, Iola, Wis. Senior C.
 Johnson, Russell C., *s, a, w, sp*, Oakland, Neb. Senior C.
 Jones, Harold Oakland, *s, a, w, sp*, Denison, Tex. A.B. (U. of Texas) '07.
 Joranson, Yngve, *a, w, sp*, Rock Island. A.B. (Augustana C.) '13.
 Kahan, Harry Leo, *s*, Gary, Ind. Senior C.
 Kanter, Aaron Elias, *s, w, sp*, Chicago. Senior C.
 Kaplan, David, *a, w, sp*, LaPorte, Ind. Senior C.
 Karcher, Frank J., *w*, Herscher. A.B. (U. of Illinois) '14.
 Keener, Harry A., *a, w, sp*, Grinnell, Ia. S.B. (Grinnell C.) '13.
 Kemper, Malcom, *a, w, sp*, Cincinnati, Ohio. Yale U.
 Kennedy, Berthold S., *a, w, sp*, Cornersville, Tenn. Senior C.
 Kerrigan, Robert L., *a, w, sp*, Michigan City, Ind. S.B. (Purdue U.) '12.
 Kilgore, Floyd, *s*, Vermilion. A.B. (DePauw U.) '12.
 Knauf, Arthur R., *s*, Chilton, Wis. U. of Wisconsin.
 Koptik, George, *s*, Chicago. Senior C.
 Kornder, Louis Henry, *s, a, w, sp*, Cedarburg, Wis. A.B. (Ripon C.) '13.
 Kuhn, Orta Edward, *s*, Stockton, Cal. A.B. (Baker U.) '06.
 Kulvinsky, Max, *s, a, w*, Chicago. S.B. '15.
 Lahners, Thomas, *s, a, w, sp*, Belvidere, Neb. S.B. (U. of Nebraska) '13.
 Landis, William Albert, *s*, Chicago. Senior C.
 Laus, Clark John, *sp*, Oshkosh, Wis. Senior C.
 Laval, John, *a, w*, Chicago. Senior C.
 Lebensohn, James Eleazar, *a, w, sp*, Chicago. S.B. '14.
 Leonard, William Magruder, *a*, Fostoria, Ohio. S.B. (Western Reserve U.) '13.
 Levin, David, *a, w, sp*, Chicago. Senior C.
 Levin, Isadore Michael, *a, w, sp*, Chicago. Senior C.
 Levy, David Mordecai, *a, w, sp*, Scranton, Pa. A.B. (Harvard U.) '14.
 Lewis, Julian Herman, *a, w, sp*, Cairo. A.M. (U. of Illinois) '10.
 Lowe, Cecil E., *s*, Severance, Kan. A.B. (Washburn C.) '13.
 Lucas, Albert Dvorak, *s*, Chicago. S.B. (U. of Wisconsin) '12.
 Lyon, Will Ferson, *s, a, w, sp*, Elkhorn, Wis. A.B. (Oberlin C.) '11.
 McCann, Ezelle, *a, w*, Toomsaba, Miss. Mississippi C.
 McCarthy, Patrick T., *a, w, sp*, Anaconda, Mont. S.B. '14.
 Macdonald, Hugh, *a, w, sp*, Peoria. Bradley Polytechnic Inst.
 McIndoo, Ralph Emerson, *a, w, sp*, Chicago. Syracuse U.
 McKenzie, Pierce, *a, w, sp*, Elwood, Ia. Senior C.
 McNally, William D., *sp*, Chicago. A.B. (U. of Michigan) '05.
 Maitland, Leslie M., *s, a, w, sp*, Chicago. S.B. (Michigan S. of Mines) '05.
 Margolis, David Jacob, *s, a, w, sp*, Chicago. Harvard U.
 Martin, Harry Paul, *s, a, w*, Chicago. A.B. (Monmouth C.) '02.
 Mathews, William S., *a*, Ashland, Wis. Senior C.
 Mattill, Peter Milton, *s, a, w, sp*, Inza, Mo. S.B. (Northwestern C.) '12.
 Mayer, Katherine Martha, *s, a, w, sp*, Chicago. S.B. '11.
 Meeker, William Raymond, *a, w, sp*, Hazel Dell. Senior C.

- Melick, Clark Owen, *a*, Chicago. S.B. (Ohio State U.) '10.
Merriman, John Riley, *a, w, sp*, Chicago. U. of Illinois.
Miles, Lurine, *s*, Salt Lake City, Utah. A.B. (U. of Utah) '11.
Miller, Charles Philip, *a, w, sp*, Oak Park. Senior C.
Miller, Gertrude Helen, *a, w*, Chicago. Unclassified.
Mohr, George Joseph, *a, w, sp*, Seattle, Wash. U. of Washington.
Moncrieff, William F., *s*, Nashville, Tenn. M.S. (Vanderbilt U.) '13.
Moody, Willson Bridges, *a, w, sp*, Evanston. A.B. (Williams C.) '14.
Moorhead, Louis David, *s, a, w, sp*, Chicago. A.B. (St. Ignatius C.) '13.
Morgenroth, Frank C., *s*, Milwaukee, Wis. Unclassified.
Mulholland, W. J., *s*, Chicago. Unclassified.
Mumma, Claude S., *a, w, sp*, Forreston. Valparaiso U.
Munns, Shirley B., *s*, Oxford, Ohio. Senior C.
Myers, Merrill M., *s*, Glenwood, Ia. S.B. (Des Moines C.) '13.
Nellans, Charles Thomas, *a, w, sp*, Chicago. Senior C.
Newcomb, Frank S., *a, w, sp*, Muskogee, Okla. Senior C.
Newman, Edward L., *a*, Chicago. Senior C.
Nichols, John Herbert, *s*, Chicago. A.B. (Oberlin C.) '11.
Noonan, James J., *a, w, sp*, Joliet. St. Ignatius C.
Noonan, William J., *a, w, sp*, Elma, Ia. Senior C.
Numbers, Joseph R., *a, w, sp*, Boise, Idaho. U. of Idaho.
Oates, Charles E., *s*, Little Rock, Ark. A.B. (U. of Arkansas) '06.
Ogden, Claude H., *s*, Cedarville, N.J. U. of Illinois.
Ohlendorf, Clarence, *a, w*, Park Ridge. S.M. '10.
Oliver, Henry E., *a, w, sp*, Signourny, Ia. U. of Iowa.
Oliver, Leonard B. E., *a, w, sp*, Signourny, Ia. U. of Iowa.
Olson, Carl Theodore, *a, w, sp*, Chicago. U. of Wisconsin.
Opie, Harold D., *a, w, sp*, Chicago. U. of Wisconsin.
Orlov, Henry Louis, *a, w, sp*, Chicago. Senior C.
Ortmayer, Marie, *s, a, w, sp*, Chicago. Ph. B. '06.
Paine, Norman C., *a, w, sp*, Chicago. S.B. '13.
Parmelee, Jane M., *a, sp*, Rochelle. Senior C.
Patrick, Florence N., *s, a, w*, Oak Park. S.B. '13.
Patton, Halford E., *a, w, sp*, Chicago. Indiana U.
Payne, Clarence H., *a, w, sp*, Chicago. U. of Michigan.
Pearlman, Samuel J., *s, a, w, sp*, Chicago. S.B. '14.
Pearsall, Clifford J., *a, w, sp*, Evansville, Wis. S.B. (Beloit C.) '14.
Perry, Eugene B., *a, w, sp*, Melvin. Senior C.
Pfunder, Malcolm C., *s, a, w, sp*, Greenwood, Wis. Senior C.
Poppen, Jacob, *a, w, sp*, Sioux Center, Ia. Hope C.
Portis, Sydney A., *w, sp*, Chicago. Senior C.
Poska, Sydney C., *a*, Lincoln, Neb. U. of Nebraska.
Powell, Clifford S., *a, w, sp*, Grinnell, Ia. S.B. (Grinnell C.) '13.
Preston, Paul J., *s*, Myelo, Minn. U. of Minnesota.
Pritchett, Lamar F., *s*, Thomasville, Ala. Unclassified.
Rabens, Isador H., *s*, Chicago. S.B. '13.
Ramos, Alfredo, *a, w*, Calumpit, P.I. A.B. (William Jewell C.) '14.
Rankin, Fred M., *a*, Akron, Ohio. Western Reserve U.

- Ray, Ruth Bodine, *s*, Waco, Tex. A.B. (Baylor U.) '13.
- Reed, Walter K., *s*, Boulder, Colo. State Preparatory S. of Colorado.
- Roberts, Mildred Jessie, *s*, Chicago. A.B. (Smith C.) '12.
- Robins, Charles A., *a, w, sp*, Rocky Ford, Colo. A.B. (William Jewell C.) '07.
- Robinson, John E., *a*, Fort Worth, Tex. Fort Worth U.
- Rock, John L., *s*, Lexington, Ky. S.B. (U. of Oklahoma) '14.
- Roderick, Lee M., *s*, Brodhead, Wis. Ohio State U.
- Rogers, Malcolm F., *a, w, sp*, Oconomowoc, Wis. A.B. (Columbia U.) '14.
- Rogers, Maurice P., *w*, Oak Park. Senior C.
- Rosenburg, Harry Louis, *sp*, Chicago. Senior C.
- Rosenheim, Ethel, *a, w*, Chicago. S.B. '13.
- Ross, Vergil A., *a, w, sp*, Rossburg, Ohio. Junior C.
- Rud, Anthony M., *a, w, sp*, Chicago. A.B. (Dartmouth C.) '14.
- Ryall, George W., *a, w, sp*, Wooster, Ohio. U. of Wooster.
- Saari, John A., *s, a*, Eveleth, Minn. U. of Minnesota.
- Sauer, Henry C., *w, sp*, Rutland. Senior C.
- Schaner, Morris, *s*, Toledo, Ohio. Senior C.
- Schelm, George W., *s, a*, Denison, Ia. U. of Iowa.
- Schlegel, Edward H., *a, w, sp*, Fort Wayne, Ind. U. of Michigan.
- Schmitt, Edwin C., *s, a, w, sp*, Moundridge, Kan. A.M. (U. of Kansas) '13.
- Schuster, Franklin P., *a, w, sp*, El Paso, Tex. S.B. '15.
- Schuster, Stephen A., *a, w, sp*, El Paso, Tex. Senior C.
- Scott, Kate Frances, *a, w, sp*, Wooster, Ohio. Ph.B. (U. of Wooster) '12.
- Seaburg, Elmer W., *a, w, sp*, Peoria. Bradley Polytechnic Inst.
- Sellers, Arthur L., Bryan, Ohio. Manchester C.
- Semerak, Celestin B., *s*, Chicago. Northwestern U.
- Shapere, Abraham D., *a, w, sp*, Chicago. U. of Minnesota.
- Sharp, William B., *s*, Nashville, Tenn. A.B. (U. of the South) '10.
- Sherman, Borris J., *a, w, sp*, Chicago. Senior C.
- Sherman, Maurice J., *a, w, sp*, Chicago. Senior C.
- Sherwood, Noble P., *s*, Lawrence, Kan. A.M. (U. of Kansas) '11.
- Shirk, Harold L., *a, w*, Topeka, Kan. A.B. (Washburn C.) '14.
- Sloan, LeRoy Hendrick, *s, a, w, sp*, Aurora. S.B. '14.
- Smith, Charles Spurgeon, *s*. S.B. (Baylor U.) '10.
- Smith, Josephine Elizabeth, *a, w, sp*, Lawson, Mo. A.B. (Central C. for Women) '12.
- Smith, Stuart Luthy, *a, w, sp*, Pittsfield. U. of Illinois.
- Smith, Vern P., *a*, Waupun, Wis. Senior C.
- Snyder, Howell, *a, w, sp*, Peoria. Bradley Polytechnic Inst.
- Sobul, Solomon A., *a, w, sp*, Cleveland, Ohio. Western Reserve U.
- Sonnenschein, Robert, *w*, Chicago. Unclassified.
- Stam, Nicholas C., *a, w, sp*, Chicago. S.B. '15.
- Stangl, Fred H., *a, w, sp*, St. Cloud, Minn. Senior C.
- Stehman, Henry M., *a, w*, Pasadena, Cal. Occidental C.
- Steinberg, Moses E., *a, w, sp*, Bassarabia, Russia. S.B. (U. of California) '14.
- Stotter, Arthur L., *a, w, sp*, Chicago. Senior C.
- St. Pierre, Edward Walter, *a, w*, Salem, Ore. A.B. (Willamette U.) '12.
- Sweet, Winfield Carey, *s, a, w*, Chicago. S.B. (Colgate U.) '13.

- Taylor, Charles Fletcher, *a, w, sp*, Chicago. Senior C.
 Taylor, William Amory, *s*, Portage, Wis. U. of Wisconsin.
 Teninga, Arthur, *a, w, sp*, Chicago. Senior C.
 Thatcher, Harvey S., *a, w, sp*, Utica, Ohio. A.B. (Ohio State U.) '09.
 Thiell, James Edward, *s*, Fond du Lac, Wis. Unclassified.
 Thomas, William A., *s, a, w*, Chicago. Ph.B. '12.
 Thompson, John Clark, *a, w, sp*, Sutton, Neb. U. of Nebraska.
 Thomson, James E., *a*, Fort Worth, Tex. Fort Worth U.
 Torpin, Richard Ivan, *a, w, sp*, Oakdale, Neb. A.B. (Nebraska Wesleyan U.) '13.
 Tsuchiya, Hiromu, *s*, Osaka, Japan. A.B. (U. of Missouri) '13.
 Tucker, David A., *s*, Hillsdale, Mich. A.M. (Parker C.) '10.
 Van de Erve, Henrietta, *s*, Wauwatosa, Wis. Hope C.
 Venable, George Lyle, *a, w, sp*, Oskaloosa, Ia. Penn C.
 Volini, Italo, *s, a, w, sp*, Chicago. S.B. '14.
 Walker, William G., *a, w*, Riceville, Ia. Senior C.
 Ware, Julian V., *a, w*, Chicago. Unclassified.
 Warzeski, Edward, *a, w, sp*, Chicago. Senior C.
 Washburn, Arthur M., *s, a, w, sp*, Burlington, Ia. U. of Iowa.
 Watts, Charles Edward, *s, a, w, sp*, Juliaette, Idaho. S.B. (U. of Idaho) '13.
 Watts, Clyde Franklin, *a, w, sp*, Lancaster, Ky. Kingswood C.
 Webb, Robert Alexander, *s*, Louisville, Ky.
 Weishaar, Herman Oliver, *a, w, sp*, Heyworth. Hiram C.
 White, Paul Amos, *s*, Washington, D.C. S.B. '08.
 White, Willard D., *s, a, w, sp*, Seattle, Wash. U. of Washington.
 Wilcox, Henry Slater, *s*, Little Falls, N.Y. A.M. (Harvard U.) '11.
 Williams, Delon A., *a, sp*, Murray, Ky. U. of Kentucky.
 Williams, Frank Argyle, *a, w, sp*, Lockbourne, Ohio. S.B. '15.
 Woodward, Lee Roy, *a, w, sp*, Mason City, Ia. S.B. (Grinnell C.) '09.

MEN—273

WOMEN—24

TOTAL—297

SPECIAL STUDENTS TAKING MEDICAL COURSES

- Barker, Augustus L., *s, a, w, sp*, Gadsden, Ala. S.M. (U. of Alabama) '11.
 Basinger, Harvey R., *w*, Pandora, Ohio. A.B. (Western Reserve U.) '09.
 Behrman, Michael, *a*, Covington, Ky. A.B. (U. of Cincinnati) '06.
 Bengston, Ida A., *a, w, sp*, Haward, Neb. A.B. (U. of Nebraska) '03.
 Berger, L. S., *a*, Chicago. U. of Wisconsin.
 Bergman, Henry D., *s*, Ames, Ia. Iowa State U.
 Berry, F., *a, w, sp*, Columbus, Ohio. A.M. (Ohio State U.) '13.
 Birdsall, C. A., *a*, Friend, Neb. Junior C.
 Blizzard, A. W., *s*, Baltimore, Ohio. S.B. (Ohio State U.) '13.
 Brons, G. P., *s*, Granburg, Tex. Unclassified.
 Buchanan, J. H., *s*, Ames, Ia. S.B. (Iowa State U.) '11.
 Burget, G. E., *a, w, sp*, Kempton, Ind. Indiana State Normal S.
 Caldwell, J. S., *s*, Jefferson City, Tenn. Ph.D. (U. of Chicago) '14.
 Campbell, Anna E., *s*, Covington, Ky. Unclassified.
 Cary, William E., *a, w, sp*, Gansevoort, N.Y. S.B. (Earlham C.) '12.
 Christman, C. H., *s*, Baton Rouge, La. Unclassified.

- Conover, L. Lenore, *s*, Detroit, Mich. S.B. (U. of Michigan) '95.
 Crosby, Elizabeth, *a, w, sp*, Petersburg, Mich. S.M. '13.
 Cummings, Mabel L., *s*, Normal. Unclassified.
 Cutler, Charles Edward, *s*, Hanover. S.B. (Coe C.) '09.
 Czaplner, M., *s*, Chicago. S.B. '14.
 Dalgity, Ruby, *a, w, sp*, Seattle, Wash. A.B. (U. of Washington) '10.
 DeSale, Adeline M., *a, w, sp*, Springfield. A.B. (Vassar C.) '14.
 Drake, Quaesita A., *a, w, sp*, Philadelphia, Pa. A.M. (Vassar C.) '11.
 Dykstra, C. J., *s*, Pella, Ia. S.B. (Central C.) '14.
 Echer, E. E., *a, w, sp*, Chicago. Agricultural C. of Holland.
 Embry, Hartley W., Chattanooga, Tenn. A.B. (U. of Nashville) '07.
 Evans, Alice, *a*, LeRaysville, Pa. S.M. (U. of Wisconsin) '10.
 Field, Hazel, *a, w, sp*, Monticello, Ind. A.B. (Western C. for Women) '12.
 Foster, Mary L., *s*, West Roxbury, Mass.
 Gaines, W. L., *s, a, w, sp*, Crete. M.S. (U. of Illinois) '10.
 Hanke, M. T., *a*, Chicago. S.B. '14.
 Hartman, C. G., *s*, Austin, Tex. A.M. (U. of Texas) '04.
 Harvey, Edward M., *s*, Wichita, Kan. A.B. (Friends U.) '10.
 Holmes, Harriet F., *a, w, sp*, Chicago. A.B. (Vassar C.) '95.
 Hyman, Libbie H., *a*, Ft. Dodge, Ia. S.B. '10.
 Jensen, Gerhard H., *s*, Chicago. Ph.D. '06.
 Keeton, Robert Wood, *s*, Gibson, Miss. S.M. '13.
 King, C. E., *s*, Thornville, Ohio. Ph.D. '14.
 King, Jessie Luella, *s*, Richmond, Ind. Ph.D. (Cornell U.) '11.
 Knight, E., *s*, Chicago. Leland Stanford Junior U.
 Knight, L. Irving, *a, w, sp*, Urbana. S.B. (U. of Illinois) '09.
 Kraybill, H. R., *w*, Mount Joy, Pa. S.B. (Penn State C.) '13.
 MacArthur, John Wood, *a*, Bowmansville, N.Y. A.M. (Wabash C.) '12.
 McBride, J. F., *s, a*, Indianapolis, Ind. S.B. (Butler C.) '14.
 Menten, Maud L., *a, w, sp*, Forest, Canada. A.B. (Toronto U.) '04.
 Miller, Elizabeth, *a*, East Chicago, Ind. Ph.B. '14.
 Moore, Carl R., *a, w, sp*, Springfield, Mo. S.B. (Drury C.) '13.
 Myers, John T., *w*, Eskridge, Kan. S.M. (U. of Kansas) '12.
 Olmsted, J. M. D., *s*, Brocton, Mass. A.M. (Oxford U.) '14.
 Pechstein, Louis Augustus, *w*, Clinton, Mo. S.B. (U. of Missouri) '13.
 Phillips, T. G., *s*, Columbus, Ohio. S.M. (Ohio State U.) '13.
 Pieper, C. J., *s*, Chicago. A.B. (Wabash C.) '10.
 Preston, P. J., *s*, Chicago. U. of Minnesota.
 Pyles, M. R., *s*, Lone Elm, Kan. S.M. '13.
 Reedy, John Henry, *s*, San Marcos, Tex. A.M. (Southern U.) '00.
 Rigg, G. B., *s*, Seattle, Wash. Ph.D. '14.
 Riggs, L. K., *a, w, sp*, Toledo, Ia. S.B. (Leander Clark U.) '11.
 Rogers, Fred Terry, *s, a, w, sp*, Waco, Tex. A.B. (Baylor U.) '11.
 Roller, Charles I., *a, w*, Naperville. Ph.B. (Northwestern C.).
 Saunders, C. W., *s*, Shreveport, La. S.M. '11.
 Schley, Eva, *a*, Topeka, Kan. Ph.D. '14.
 Sears, H. J., *s*, Palo Alto, Cal. A.M. (Leland Stanford Junior U.) '12.
 Sharp, William B., *s*, Nashville, Tenn. A.B. (U. of the South) '10.

- Sherman, Hope, *s, w, sp*, Brookline, Mass. A.B. (Smith C.) '07.
 Sidway, Gladys L., *a, w, sp*, Chicago. Junior C.
 Slye, Maud, *a, w, sp*, St. Paul, Minn. Ph.D.
 Smith, L. A., *s*, Portis, Kan. A.M. (U. of Kansas) '14.
 Spieth, G. E., *s*, Albany, Mo. A.B. (Defiance C.) '11.
 Supple, O. E., *a*, Chicago. Lewis Inst.
 Syverson, Bion C., *s*, Chicago. Unclassified.
 Trumble, Anna C., Decatur. Unclassified.
 Tseo, P. Y., *s*, Nanchang, China. U. of Michigan.
 Vineyard, Anna, *s*, Helena, Ark. S.B. (U. of Mississippi) '09.
 Waller, J. C., *w*, London, England. A.B. (Cambridge U.).
 Wayland, T. A., *s*, Oak Park. U. of Illinois.
 White, Ernest H., *s*, Comer, Ky. A.B. (Clark U.) '01.
 White, Katherine F., *s*, Chicago. Northwestern U.
 Worcester, J. L., *s*, Brigham, Ala. Unclassified.

MEN—56

WOMEN—23

TOTAL—79

JUNIOR CLASS

- Adams, Clarence Walter, *a, w, sp*, Olney.
 Anderson, Lionel Hurd, *a, w, sp*, Kewanee. B.S. '13.
 Baldwin, Arthur Kirby, *a, w, sp*, Aledo. B.S. (Vashti C.).
 Becker, Wesley Charles, *s, a, w, sp*, Salt Lake City, Utah. A.B. (U. of Nebraska).
 Billik, Cyril Danilovitch, *a, w, sp*, Valney, Russia. Ph.B.
 Blitzsten, Nathan Lionel, *a, w, sp*, Chicago.
 Bower, Albert G., *a, w, sp*, Salt Lake City, Utah. Leland Stanford Junior U.
 Braafadt, Louis Henry, *a, w, sp*, Belview, Minn. A.B. (Luther C.).
 Broman, Martin Robert, *a, w, sp*, Lincoln, Neb. S.B. (U. of Nebraska).
 Brown, Will Lee, *s, a, w, sp*, Runge, Tex. A.B. (U. of Texas).
 Brunemeier, Edward Herman, *a, w, sp*, Hubbard, Ia. Northwestern C.
 Burk, William, *a, w, sp*, Chicago.
 Caldwell, George T., *a*, Columbus, Ohio. A.B. (Ohio State U.) '10; A.M. (*ibid.*) '11.
 Cameron, Angus Laverne, *a, w, sp*, Hamilton, Ind. A.B. (Indiana U.) '13; A.M. (*ibid.*) '14.
 Capps, Murl T., *s, a, w, sp*, Colorado Springs, Colo. A.B. (U. of Kansas) '14.
 Carpenter, Ralph Waldo, *a, w, sp*, Des Moines, Ia. Drake U.
 Carrico, Mamie Leola, *a, w, sp*, Ashmore. Millikin U.
 Cilbelius, Charles Anthony, *a, w, sp*, Racine, Wis. S.B. (U. of Wisconsin) '14.
 Coffman, Carl Flory, *sp*, Elkton, Va. A.B. (Northwestern U.) '11.
 Cox, Hoyt H., *a, w, sp*, Chicago. S.B. '14.
 Dart, Raymond Osborne, *a, w, sp*, Lawrence, Kan. A.B. (U. of Kansas) '14.
 DuBois, Charles Frederick, *a, w, sp*, Grand Forks, N.D. A.B. (U. of North Dakota) '13.
 Ekfelt, Odd, *a, w, sp*, Bode, Ia. A.B. (Luther C.) '10.
 Eklund, William Joakim, *a, w, sp*, Duluth, Minn. S.B. '15.
 Elliott, James Ryan, *a, w, sp*, Linn, Kan. A.B. (U. of Kansas) '14.
 Elliston, Robert Lee, *a, w, sp*, Princeton. S.B. '14.

- Engel, Charles Paul, *a, w, sp*, Winona, Minn. S.B. '14.
 French, Valiant Dee, *a, w, sp*, St. Joseph, Mo. S.B. (Drake U.) '14.
 Frost, Kendal Phelps, *a, w, sp*, Los Angeles, Cal. B.S. (U. of California) '13.
 Gifford, Martha Jane, *a, w, sp*, Corning, N.Y. Ph.B. (Kalamazoo C.).
 Gillis, James Peter, *a, w, sp*, Antigo, Wis. B.S. (U. of Wisconsin) '14.
 Gilroy, Earl William, *a, w, sp*, Minneapolis, Minn. S.B. '14.
 Ginsburg, Harry, *a, w, sp*, Chicago. Senior C.
 Glascock, Fred Leib, *a, w, sp*, Muncie, Ind. Ohio Wesleyan.
 Greenacre, Phyllis, *a, w, sp*, Chicago. S.B. '13.
 Greenberg, Philip B., *a, w, sp*, Chicago. Senior C.
 Grigsby, Roll O., *a, w, sp*, Blandenville, Ill. S.B. '14.
 Haessler, Herbert Ferdinand, *a*, Milwaukee, Wis. A.B. (U. of Wisconsin) '13.
 Hallock, Earle Kenneth, *a, w, sp*, Scottsville, N.Y. A.B. (Hamilton C.) '13.
 Hanger, Burt Horace, *a, w, sp*, Gays. U. of Illinois.
 Heine, Clinton Daniel, *s, a, w, sp*, Hooper. A.B. (U. of Nebraska) '13.
 Hirsch, Edwin Walter, *a, w, sp*, Chicago. S.B. '14.
 Hunter, Paul Mathers, *a, w, sp*, Chicago.
 Jackson, William Reginald, *a, w, sp*, Kansas City, Mo. A.B. (U. of Missouri) '14.
 Kalin, Oscar Theodore, *a, w, sp*, Clay Center, Kan. A.B. (U. of Kansas) '14.
 Kilgore, Floyd Vern, *a, w, sp*, Chicago. A.B. (De Pauw U.) '12.
 King, Ivan W., *a, w, sp*, Charleston. S.B. '14.
 King, Owen, *s, a, w, sp*, Ellendale, N.D. S.B. '14.
 Kispert, Robert W., *a, w, sp*, Chicago. S.B. '14.
 Knauf, Arthur Raymond, *a, w, sp*, Chilton, Wis. Notre Dame; U. of Wisconsin.
 Koch, William Vincent, *a, w, sp*, Janesville, Wis. B.S. (U. of Wisconsin) '14.
 Kulvinsky, Max, *sp*, Chicago. S.B. '05.
 Larkin, Aloysius Jas., *a, w, sp*, Whitewater, Wis. B.S. (U. of Wisconsin) '14.
 Leonard, Walter Eber, *s, a, w, sp*, Los Angeles, Cal. U. of California; U. of Southern California.
 Lewis, Julian Herman, *sp*, Cairo. A.B. (U. of Illinois) '11; A.M. (*ibid.*) '12.
 Lifschitz, Jacob Benj., *a, w, sp*, Chicago. Senior C.
 Llewellyn, John Rees, *a, w, sp*, Price, Utah. A.B. (U. of Utah) '13.
 Lovas, Arnt, *s, a, w, sp*, Seneca, Ill. St. Olaf's C.
 Luehrs, Leslie, *a, w, sp*, Pipestone, Minn. S.B. '14.
 Lund, Simon Oscar, *a, w, sp*, Dawson, Minn. A.B. (St. Olaf's C.).
 Lussy, Herbert Otto, *a, w, sp*, Ottawa. S.B. '09.
 Martin, Henry Paul, *sp*. A.B. (Monmouth C.) '02.
 Mayer, Roland G. Lewis, *a, w, sp*, New Ulm, Minn. S.B. '14.
 McCormick, Jay Harry, *s, a, w, sp*, Soldiers Grove, Wis. U. of Wisconsin.
 McGrath, Wilmer Delavergne, *a, w, sp*, Grand Island, Neb. U. of Nebraska.
 Meyer, Jacob, *a, w, sp*, Chicago. Senior C.
 Millstone, Henry James, *a, w, sp*, Nashville, Tenn. Peabody Inst.
 Mulder, Jacob B., *a, w, sp*, Rock Valley, Ia. Calvin C.
 Munger, Claude W., *a, w, sp*, Chicago. Senior C.
 Myers, Merrill Maitland, *a, sp*, Glenwood, Ia. S.B. (Des Moines C.) '13.
 Nichols, John Herbert, *a, w, sp*, Chicago. A.B. (Oberlin C.) '10.
 Nies, William Blaudine, *a*, Fort Worth, Tex. A.B. (Fort Worth U.) '12.

- Olney, Harold, *a, w, sp*, Mendon, Mich. U. of Illinois.
 Parker, Bennett Roland, *a, w, sp*, Peoria. Senior C.
 Pearlman, Samuel J., *sp*, Chicago. S.B. '14.
 Porter, Ralph Orlando, *a, sp*, Porterville, Utah. S.B. (Utah Agricultural C.) '12.
 Rabens, Isidore A., *a, w, sp*, Chicago. Senior C.
 Ramser, Harold A., *a, w, sp*, Chicago.
 Roberts, Mildred Jessie, *a, w, sp*, Chicago. A.B. (Smith C.) '12.
 Rogers, Maurice P., *a, w, sp*, Oak Park. S.B. '15.
 Rogne, Conrad Oliver, *a, w, sp*, Sturgeon Bay, Wis. A.B. (St. Olaf's C.) '12.
 Rose, Milton E., *a, w, sp*, Dubuque, Ia. S.B. (U. of Wis.) '13.
 Roos, Edmund Carl, *a, w, sp*, Chicago. S.B. (U. of Wisconsin) '13.
 Rosenbaum, Harold Alvin, *a, w, sp*, Harvard, Neb. A.B. (U. of Nebraska) '14.
 Rowe, Paul H., *a, w, sp*, Chicago. S.B. (U. of Minnesota) '14.
 Rupp, Jacob Rotj, *a, w, sp*, Archibald, Ohio. A.B. (Goshen C.) '12.
 Saari, John, *w, sp*, Eveleth, Minn. U. of Minnesota.
 Schuster, Franklin P., *sp*, El Paso, Tex. S.B. '15.
 Semerak, Celestin Benno, *a, w, sp*, Chicago. S.B. (Northwestern U.) '15.
 Senty, Elmer George, *a, w, sp*, Arcadia, Wis. S.B. (U. of Wisconsin) '14.
 Shafer, Bertha Meserve, *a, w*, Salt Lake City, Utah. A.B. (U. of Utah) '14.
 Shafer, Leland Charles, *a, w, sp*, Salt Lake City, Utah. A.B. (U. of Utah) '14.
 Silver, Maurice J., *sp*, New York City. S.B. (Iowa State U.) '15.
 Smith, Frank Lee, *a, w, sp*, Bald Hill, Pa.
 Smith, Lester Alvin, *a, w, sp*, Lawrence, Kan. A.B. (U. of Kansas) '13.
 Smith, William LeRoy, *a, w, sp*, Logan, Utah. B.S. (Utah Agricultural C.) '13.
 Spencer, Walter James, *a, w, sp*, Tacoma, Wash. S.B. '14.
 Stevenson, William Warren, *a, w, sp*, Vermilion, S.D. A.B. (U. of South Dakota) '14.
 Stulik, Chas-Klaus, *a, w, sp*, Chicago. S.B. '13.
 Swickard, Clinton Daniel, *a, w, sp*, Newman. S.B. '14.
 Taylor, Wm. Amory, *a, w, sp*, Portage, Wis. S.B. '15.
 Theige, Karl Johannes, *a, w, sp*, Viroqua, Wis. A.B. (U. of Wisconsin) '08.
 Thomas, William, *a*, Chicago. Ph.B. '12.
 Tompkins, Charles Ray, *a, w, sp*, Oberon, N.D. A.B. (U. of North Dakota) '12.
 Torchiani, Bertha, *a, w, sp*, Chicago. A.B. (Lake Forest C.) '12.
 Tumpowsky, Isidor, *a, w, sp*, Chicago. Senior C.
 Turgeson, Edward Travers, *a, w, sp*, Richland Center, Wis. Carroll C.
 Vehe, Karl, *s*, Chicago. S.B. '12.
 Vetter, James Harry, *a, w, sp*, Aberdeen, S.D. A.B. (U. of South Dakota) '14.
 Vogel, Melvin Albert, *a, w, sp*, New Ulm, Minn. U. of Minnesota.
 Vruwink, John, *a, w, sp*, Grand Rapids, Mich. Hope C.
 Willy, Ralph Gilmer, *a, w, sp*, Kimball, S.D. A.B. (U. of South Dakota) '13.
 Zaegel, Robert Lupinski, *a, w, sp*, Sheboygan, Wis. B.S. (U. of Wisconsin) '14

SENIOR CLASS

- Adams, Eldridge Stevens, *s, a*, Atchison, Kan. A.B. (Kansas U.) '13.
 Aeilt, Eerko Samuel, *s, a, w*, Little Rock, Ia. A.B. (Hope C.) '13.
 Allen, Thos. Dyer, *s, a, w, sp*, Chicago. A.B. (Denison U.) '13.
 Andrews, Edmund, *s, a, w*, Chicago. A.B. (Yale U.) '13.

- Asby, Clifford, *a, w, sp*, Salt Lake City, Utah. A. B. (U. of Utah) '20.
 Baker, Hillier Locke, *s, a, w, sp*, Chicago. S.B. '12.
 Berkheiser, Elvin James, *s, a*, Sheldon. A.B. (Lake Forest C.) '09.
 Beyer, Theodore Ernest, *s, a, w*, Milwaukee, Wis. A.B. (U. of Wisconsin) '13.
 Bjerken, Frederik Nikolas, *s, a, w, sp*, Kindred, N.D. A.B. (U. of North Dakota) '13.
 Black, Paul, *s, a, w*, Greenup. Eastern Illinois State Normal S. '07; S.B. '14.
 Bolibaugh, Oral Bevol, *s, a, w, sp*, Holbrook, Neb. U. of Nebraska '13.
 Bowman, Lang Fulton, *s, a, w, sp*, Olney. A.B. (U. of Illinois) '12.
 Brereton, Gilbert Elliott, *s, a*, Lodi, Wis. S.B. (U. of Wisconsin) '13. ✓
 Breuer, Miles John, *a, w, sp*, Ennis, Tex. A.B. (U. of Texas) '11.
 Buis, Ruth Stewart, *a, w, sp*, Lebanon, Ind. A.B. (U. of Indiana) '13.
 Carr, Andy Morton, *s, a, w*, Minot, N.D. A.B. (U. of North Dakota) '13.
 Carter, Homer McClelland, *s, a, w*, Madison, Wis. A.B. (Beloit C.) '09.
 Christenson, Warren Oscar, *s, a, w*, Fairview, Utah. A.B. (U. of Utah) '14.
 Clark, Carl Wesley, *s, a, w*, Groton, S.D. A.B. (U. of South Dakota) '13.
 Clark, Elbert, *a, w, sp*, Chicago. Ph.D.
 Clark, Vinton John, *a, w, sp*, Burlington, Kan. A.B. (Simpson C.) '05.
 Cook, Robert Carl, *s, a, w*, St. Paul, Minn. S.B. (U. of Minnesota) '13.
 Cops, Lyman Alden, *s, a, w*, Stevens Point, Wis. S.B. '13.
 Cruzen, Roy E., *a*, Walnut Hill. Northwestern U.
 Deveraux, Thomas Joseph, *s, a, w*, Elmo, Ia. Creighton U., '10.
 Doty, Flavia May, *s, a, w, sp*, Chicago. S.B.
 DuBois, Julian Faville, *s, a*, Sauk Center, Minn. S.B. (Beloit C.) '10.
 Dunlap, Lawrence Glen, *s, a, w, sp*, Bath. S.B. '11.
 Edmonds, Devilla David, *s, w*, Tina, Mo.
 Ellison, Edward Orlando, *s, a, w, sp*, Minot, N.D. A.B. (U. of North Dakota) '11.
 Emge, Ludwig Augustus, *s, a, w*, Chicago. S.B. (Hanover C.) '13.
 Fernandez, Eugene, *s, a, w, sp*, Rio Grande. S.B. '13.
 Fessenden, Ersel Mial, *a, w*, Emporia, Kan. A.B. (U. of Kansas) '13.
 Freund, Carl, *s, a, w*, Belvidere. S.B. (U. of Wisconsin) '13.
 Funkhouser, Elmer, *s, a, w*, Mauckport, Ind. A.B. (Valparaiso U.) '09.
 Gatewood, Wesley Emmet, *s, a, w, sp*, Clintonville, Ohio. A.M. (Ohio U.) '11.
 Gauss, Harry, *s, a, w*, Chicago. S.B. '13.
 Glaspel, Cyril John, *s, a, w*, Grafton, N.D. A.B. (U. of North Dakota) '13.
 Glynn, Robert Raymond, *s, a, w*, Springfield, Mo. S.B. '13.
 Graham, Milton Peter, *s, a, w*, Carrington, N.D. A.B. (U. of North Dakota) '13.
 Ham, John Paul, *s, a, w*, Hardy, Neb. S.B. (U. of Nebraska) '12.
 Hardinger, Ralph Wilbur, *s, a, w*, Mattoon. A.B. (U. of Illinois) '14.
 Hardy, Faith Frances, *s, a, w*, Unionville, Ohio. A.B. (Oberlin C.) '11.
 Harris, Carl N., *s, a, w*, Wilmot, S.D. A.B. (Wabash C.) '10.
 Haugen, Albert Ingvald, *s, a, w*, Elbow Lake, Minn. S.B. (U. of Minnesota) '13.
 Havens, Fred Z., *s, a, w*, Des Moines, Ia. A.B. (Drake U.) '12.
 Henderson, Robert Houston, *s, a, w*, Clearfield, Ia. S.B. (Tarkio C.) '10.
 Herrold, Russell Dorr, *s, a, w*, Herrold, Ia. S.B. (Drake U.) '11.
 Hill, Harold Crawford, *s*, Chicago. S.B. '11.
 Hirsch, Edwin Frederick, *s, a, w, sp*, Chicago. S.B. '12; Ph.D. '13.
 Hoffmann, Walter H. O., *a, w, sp*, Chicago. U. of Heidelberg, Berlin, Jena.

- Hopkins, Lewis Andrew, *s, a, w, sp*, Grinnell, Ia. S.B. (Grinnell C.) '09.
Hunter, James Edward, *s, a, w, sp*, Somers, Mont. '11.
Jacobson, Edmund, *s, a, w*, Chicago. S.B. (Northwestern U.) '10. Ph.D. (Harvard) '12.
Johnson, Peter Omar Conrad, *s, a, w*, Glenwood, Minn. A.B. (U. of North Dakota) '13.
Jones, Richard Newton, *s*, Vaughansville, Ohio.
Jones, William Solomon, *s, a, w*, Jeffersonville, Ga. A.B. (U. of Georgia) '11.
Kneeshaw, Robert Stanley, *s, a, w*, Pembina, N.D. A.B. (U. of North Dakota) '13.
Langhorst, Arthur Louis, *s, a, w*, Aurora. S.B. '11.
Leonard, Eugene Thos., *s, a, w*, Hollandale, Wis. A.B. (Marquette U.) '10.
Lewis, Karl, *s, a, w*, Grand Rapids. S.B. '11.
McCreight, George, *s, a, w*, Des Moines, Ia. S.B. (Drake U.) '12.
McLain, Liva Chas., *s, a, w*, Colorado City, Colo. S.B. (Oregon C.) '08.
McLaren, John Bruce, *s, a, w*, Chicago. U. of Michigan, '03.
Marek, Frank Benjamin, *s, a, w*, Cadott, Wis. S.B. (U. of Wisconsin) '14.
Maurer, Fred Henry, *s, a, w, sp*, Peoria. A.B. (Bradley Poly. Inst.) '11.
Menne, Frank Raymond, *a, w, sp*, Eden, Wis. S.B. (U. of Wisconsin) '13.
Mertz, Elmer Leonard, *s, a, sp*, Downer's Grove. A.B. (Indiana U.) '13.
Miles, Lee Monroe, *s, sp*, Milwaukee, Wis. S.B. (Grinnell C.) '09.
Miles, Lurine, *a, w, sp*, Salt Lake City, Utah. A.B. (U. of Utah) '11.
Mitchell, Claude William, *s*, Omaha, Neb. Ph.D. (U. of Nebraska) '14.
Moe, Harry Bugge, *s, a, w*, McFarland, Wis. S.B. (U. of Wisconsin) '13.
Montgomery, James Gordon, *s, a, w, sp*, Van West, Ohio. S.B. (U. of Idaho) '11.
Murphy, Francis Geo., *a, w, sp*, Mapleton, N.D. S.B. (U. of Minnesota) '13.
Murphy, Lyman Clements, *s, a, w, sp*, Chicago. A.B. (Johns Hopkins U.) '02.
Orr, James Sydney, *s, a, w*, Mount Hope, Wis. S.B. '13.
Pierce, Marion Louise, *s, a, w*, Chicago. S.B. '11.
Piper, Clark Culbertson, *s, a, w*, Sumner. A.B. (U. of Illinois) '13.
Pond, Melbourne Jabez, *s, a, w*, East Berkshire, Vt. A.B. (Middlebury U.) '10.
Preston, Paul James, *a, w, sp*, Minneapolis, Minn. U. of Minnesota, '10.
Priem, Harry W., *s*, Chicago. S.B. (Northwestern C.) '10.
Rappaport, Benjamin, *s, a, w*, Ottawa, Ohio. S.B. '13.
Raulston, Burrell Otto, *s, a, w*, Kodak, Tenn. A.B. (Maryville C.) '09.
Rees, George LeRoy, *s, a, w, sp*, Benson, Utah. S.B. (Utah Agricultural C.) '11.
Rietz, Walter Herman, *s, a, w*, Manitowoc, Wis. S.B. (U. of Wisconsin) '13.
Robbins, George Hiram, *s, a, w*, Milwaukee, Wis. S.B. (U. of Wisconsin) '13.
Robertson, Clarence William, *s, a, w*, Park View, N.D. A.B. (U. of North Dakota) '11.
Robinson, John E., *w, sp*, Fort Worth, Tex. Fort Worth U., '11.
Robison, William, *s, a, w*, Murfreesboro, Tenn. S.B. '13.
Rose, Cassie Belle, *s, a*, Lawton, Okla. B.S. (Oklahoma State U.) '10.
Roskilly, Gerald Clarence, *s, a, w*, Virginia, Minn. S.B. (U. of Minnesota) '13.
Ruka, Emil Albert, *s, a, w*, Boscobel, Wis. S.B. (U. of Wisconsin) '13.
Sansum, William David, *s, a, w, sp*, Baraboo, Wis. S.B. (U. of Wisconsin) '13.
Scully, Francis Joseph, *a, w, sp*, Bottineau, N.D. A.B. (U. of Wisconsin) '12.
Sights, Warren Preston, *a, w, sp*, Hopkinsville, Ky. S.B. '12.

- Slaght, Carrie E., *s, a, w*, Interlaken, N.Y. Ph.B. (Kalamazoo C.) '10.
 Smeltzer, Charles Everett, *s, a*, Iola, Kan. B.S. (U. of Oklahoma) '12.
 Snapp, Carl Foster, *s, a, w*, Findley. A.B. '11.
 Snorf, Lowell Delford, *a, w, sp*, Verona, Ohio. S.B. '11.
 Snow, Perry Gardner, *s*, Salt Lake City, Utah. A.B. (U. of Utah) '09.
 Stutsman, Wm. Harold, *s, a, w*, Hymera, Ind. S.B. (Ohio Wesleyan U.) '09.
 Sullivan, Michael Joseph, *s, a, w*, Jackson, Neb. S.B. '15.
 Sutherland, William Leonard, *s, a, w*, Chicago. A.B. (U. of Utah) '13.
 Swim, William Allan, *s, a*, Millersville. S.B. '12.
 Tatum, Arthur Laurie, *s, a*, Boulder, Colo. S.B. (Penn. C.) '07.
 Thompson, James E., *w, sp*, Fort Worth, Tex. Northwestern U. '11.
 Thomson, Charles Alexander, *a, w, sp*, Spokane, Wash. A.B. (Dalhousie C.) '03.
 Thornton, John William, *s, a, w*, Lansing, Ia. A.B. (St. Ignatius C.) '13.
 Thuresson, Paul Frank, *s, a, w*, Uni Place, Neb. A.B. (Northwestern U.) '09.
 Tillmanns, Ernest Gustav, *s*, Rapir, India. Elmhurst C.
 Tsuchiya, Hiromu, *s, a, w, sp*, Osaka, Japan. A.B. (U. of Missouri) '13.
 Twyman, George Thomas, *s, a, w*, Independence, Miss. A.B. (U. of Kansas) '13.
 Unger, Leon, *s, a, w*, Chicago. S.B. '13.
 Van de Erve, Henderina, *a*, Spring Hill, Ala. Hope C.
 Vaughan, Lynn Brian, *s*, Urbana, Ill. A.B. (U. of Illinois) '12.
 Werlich, Richard Eugene, *s, a, w*, Chicago. S.B. (U. of Wisconsin) '13.
 Westland, Edw. Walter, *a, w, sp*, Chicago. S.B. '13.
 White, Adeline Rawson, *s, a, w, sp*, La Crosse, Wis. S.B. (U. of Wisconsin) '99.

	Men	Women	Total
Freshmen and Sophomores, including special students.....	329	57	386
Juniors.....	107	6	113
Seniors.....	107	9	116
Practitioners.....	36	4	40
Total, less duplicates.....	548	72	620

